

**420-TP-020-002**

## **Release 5A**

# **Implementation Earth Science Data Model for the ECS Project**

**Technical Paper**

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## Abstract

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This technical paper contains the Earth Science Data (Conceptual) Model, which organizes and describes the metadata, for the Earth Observation System Data and Information Core System (ECS), for Release 5A Implementation Design. The Data Model includes diagrams that graphically illustrate the relationships between classes, and the attribute specifications. The relationships and information among data objects are described as they are understood and utilized within the Earth Science Community. In addition, the Data Model includes diagrams that graphically illustrate the relationships of classes, the attributes contained within the classes, the characteristics of the relationships between classes, and the attribute specifications. The diagrams and specifications which were previously products of the Interactive Development Environment (IDE)/Object Modeling Technique (OMT) Computer Aided Software Engineering (CASE) Tool, have changed to products of Power Designer, an Entity Relationship Diagram (ERD) representation. The specifications are defined in alphabetical order for cross-reference to the diagrams. This document has incorporated updated material from addendums/erratas from B.0 Implementation Data Model dated May 1997 through Release 5A Data Model dated July 2000.

The relationships and information among the data objects are described as they are understood and used within the Earth Science Community. In conclusion, this technical paper continues to remain under the control of the ECS Configuration Control Board.

**Keywords:** Attributes, Conceptual, CSDT, Database, Design, Dictionary, Domains, Specifications, ESDT, Files, Valid

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# Change Information Page

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# **1. Introduction**

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## **1.1 Purpose**

The purpose of this technical document is to provide modifications to the Release 5A Earth Science Data Model for the ECS Project (420-TP-015-004) which illustrate, specify, and communicate the design of the ECS earth science metadata. This technical paper represents the Release 5A Implementation design of the ECS earth science data model, useful to designers, developers, scientists and managers. The earth science metadata model represented in this document is a practical means of assuring the consistency of data requirements across subsystems, and supporting the data standardization necessary for total system interoperability within a heterogeneous open systems environment.

## **1.2 Organization**

This paper is organized in accordance with ESDIS standard format. A description of the document content follows:

- Section 2 contains the Release 5A Implementation Earth Science object model, class descriptions, attribute specifications and Validis.

If you have any questions regarding technical information contained within this Paper should be addressed to the following ECS contacts:

- Michelle Johnson, Data Engineer, (301) 883-4033, ddm@eos.hitc.com
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1616 McCormick Drive  
Upper Marlboro, MD 20774-5301

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## **2. Release 5A Implementation Earth Science Data Model**

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### **2.1 Release 5A Implementation Earth Science Data Model: ERD Diagrams**

The Release 5A Implementation Earth Science Data Model consists primarily of metadata that can be mapped to the upper layers of the data pyramid. This metadata describes the details of large amounts of data that are generally associated with the remaining levels of the data pyramid and archived in various media and format. Data other than metadata are pointed to in the diagrams (e.g., Granules for Levels 0 through 4, Documents, Algorithms, Production History, and Statistics.)

Historical primary implementation modifications since the Release 2 Earth Science Data Model for the ECS Project (420-TP-015-003) to Release 5A are listed below:

- Added new Valid and/or Keywords from MODIS instrument teams

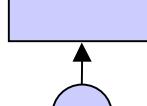
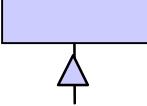
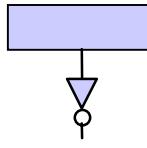
The Earth Science Data Model is very large and not suited to be displayed legibly in a single diagram (global diagram – Figure 2-2); therefore, it is logically segmented into modules for the purpose of readability. The eight modules, when concatenated, represent the entire Earth Science Data Model.

Offpage connectors are included in the global diagram (Figure 2-2), as required, to allow for relationships to classes within various other modules. Offpage connectors are not, however, included in the diagrams of the submodels (Figures 2-3 through 2-10). Offpage connectors are also used to relate the data that involve classes of data that are not in the Earth Science Data Model. Those attributes having the term “pointer” included in the attribute name indicate that a data object is external to the metadata and a link to the data object must exist.

In this section the various modules are represented by Entity-Relationship Diagrams (ERD) diagrams (Figures 2-2 through 2-10), generated from the Power Designer tool. The specifications for the attributes within each class are found in Section 2.1.1.

An explanation of the differences in representation between ERD (Power Designer) and OMT is presented in Figure 2-1.

# ERD Mapping (Power Designer to OMT)

Multiplicity of Associations	Power Designer	OMT
Exactly One		
Many (zero or more)		
Optional (zero or one)		
One or More		
Inheritance		
Dependence		
Terminology Mapping		
<u>Power Designer</u>		<u>OMT</u>
Entity		Class
Data Item		Attribute
Entity Relationship Design (ERD)		Object-Modeling Technique (OMT)
Relationship		Association
Inheritance		Inheritance
Domain (list of valids)		Domain Value

**Figure 2-1. ERD Mapping**

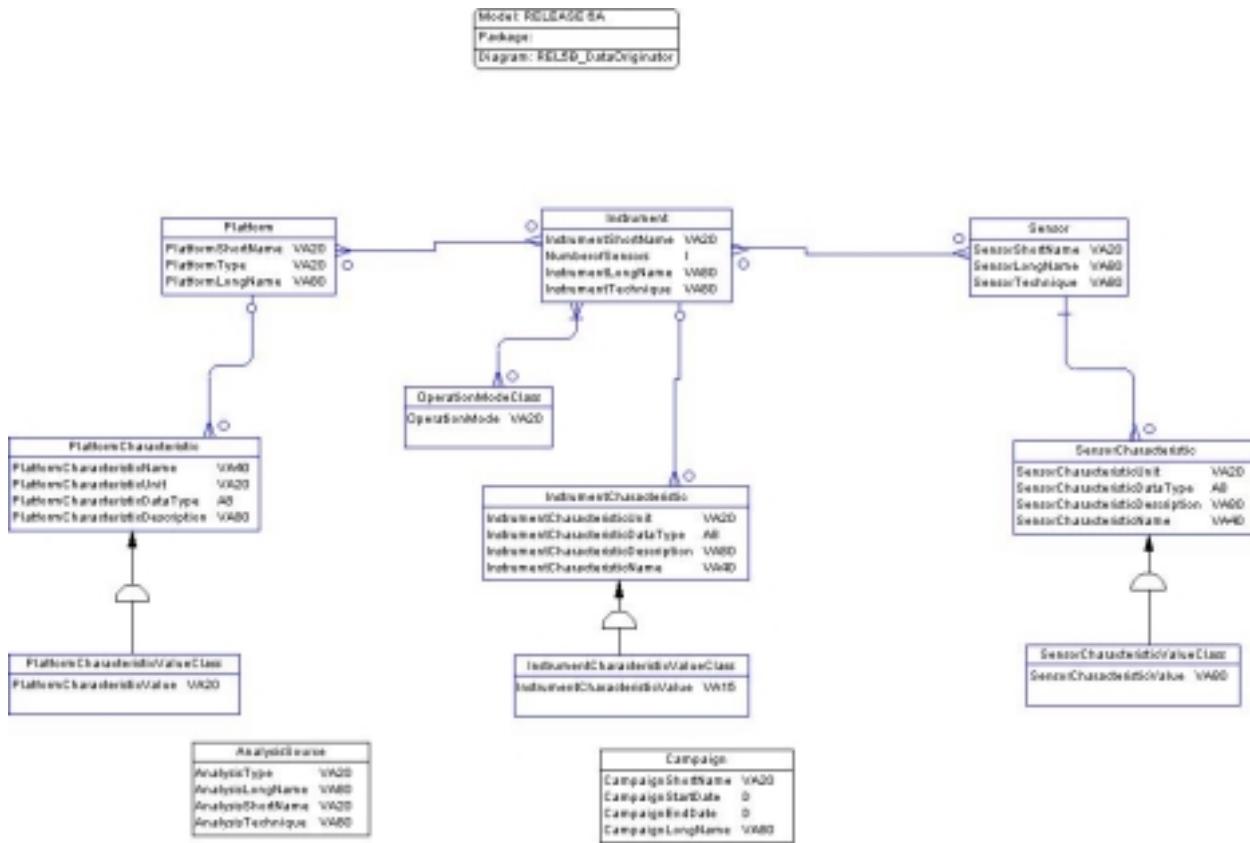
Hold for 11 X 17

**Figure 2.2. Release 5A Implementation Global Model**

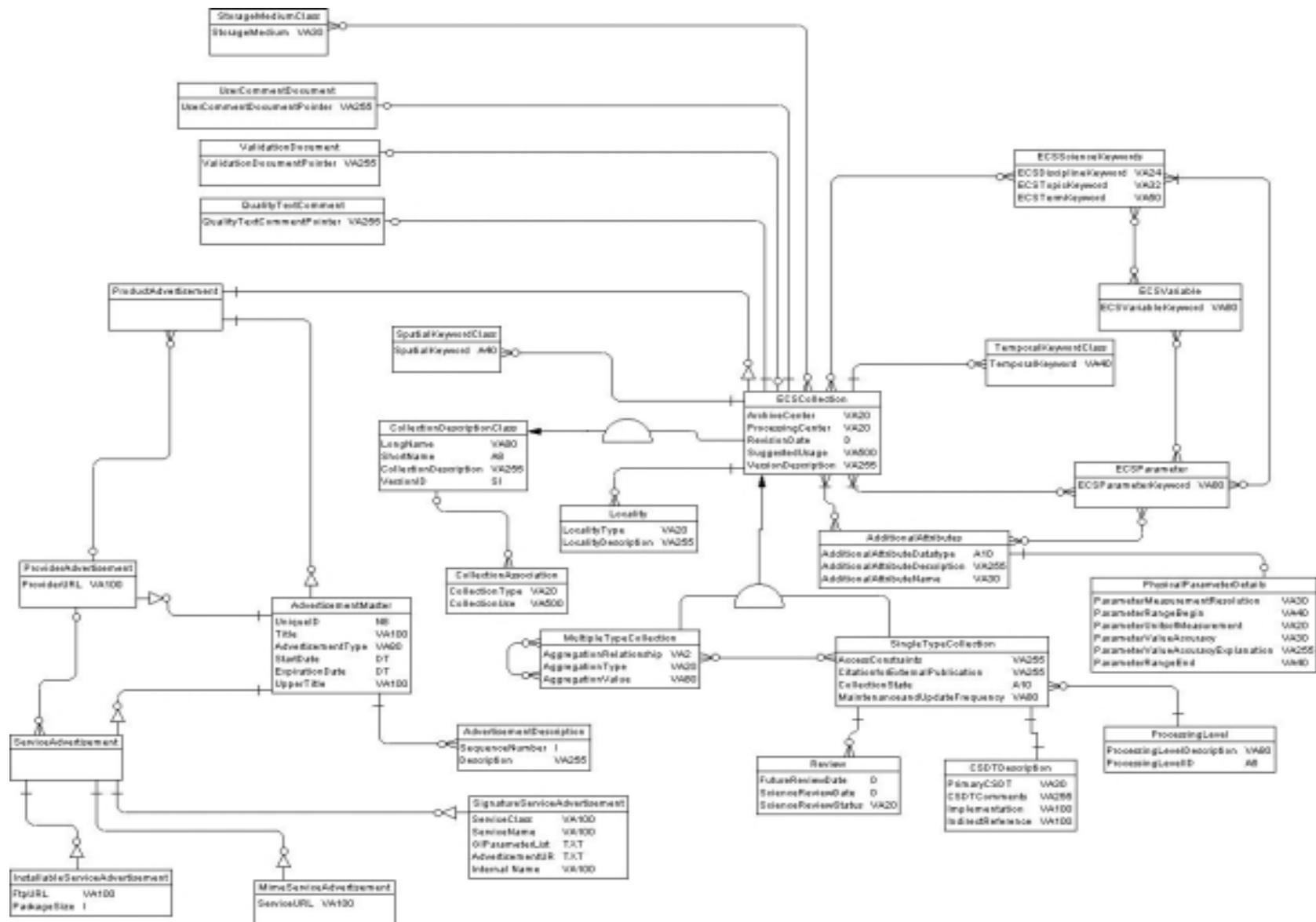
Hold for 11 X 17

**Table 2-1. Attribute DataType Definitions**

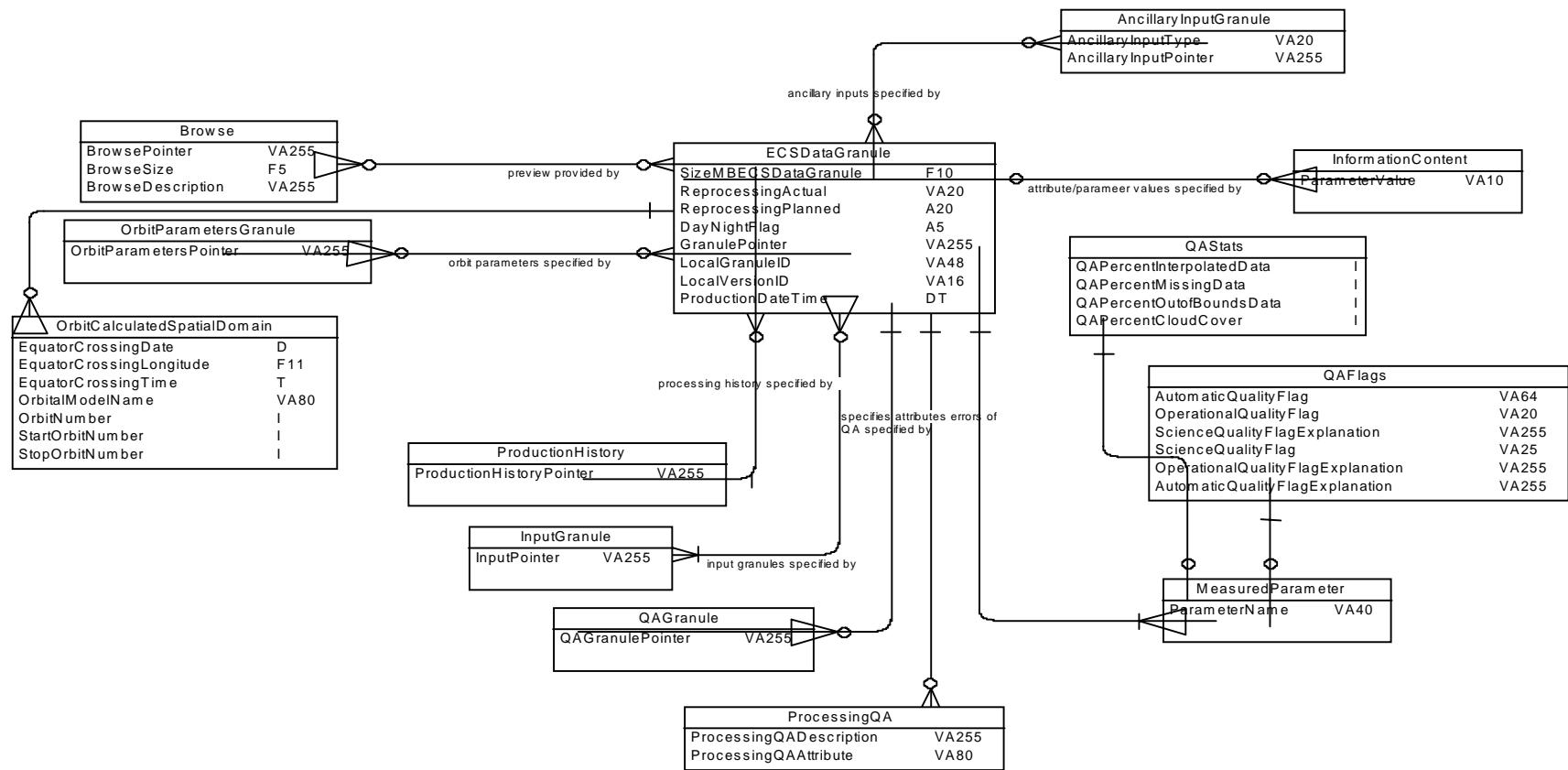
Conceptual Data Type	Code in DEF File	What It Stores	Translation Example For SQL Anywhere
Character	A	Character strings of fixed length	char
Variable Characters	VA	Character strings of variable length	varchar
Boolean	BL	Two opposing values (true/false; yes/no; 1/0)	numeric(1)
Text	TXT	Character strings of variable length	long varchar
Short Integer	SI	16-bit integer	smallint
Integer	I	32-bit integer	integer
Number	N	Number with a fixed decimal point	numeric
Float	F	32-bit floating decimal number	float
Short Float	SF	Less than 32-bit floating decimal numbers	real
Long Float	LF	64-bit floating decimal numbers	double
Date	D	Day, month, and year	date
Time	T	Hour, minute, and second	time
Date & Time	DT	Date and time	timestamp



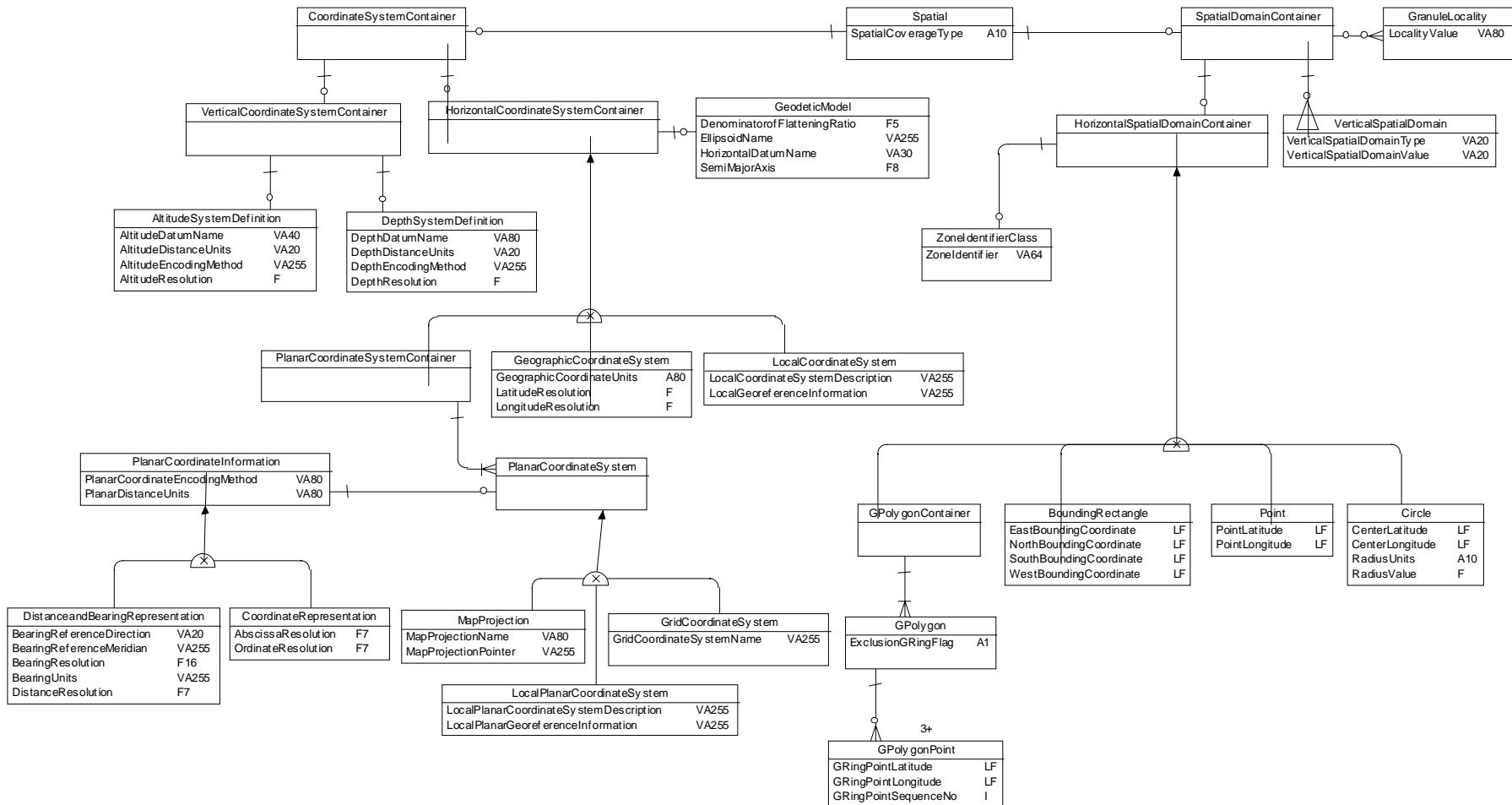
**Figure 2-3. Data Originator**



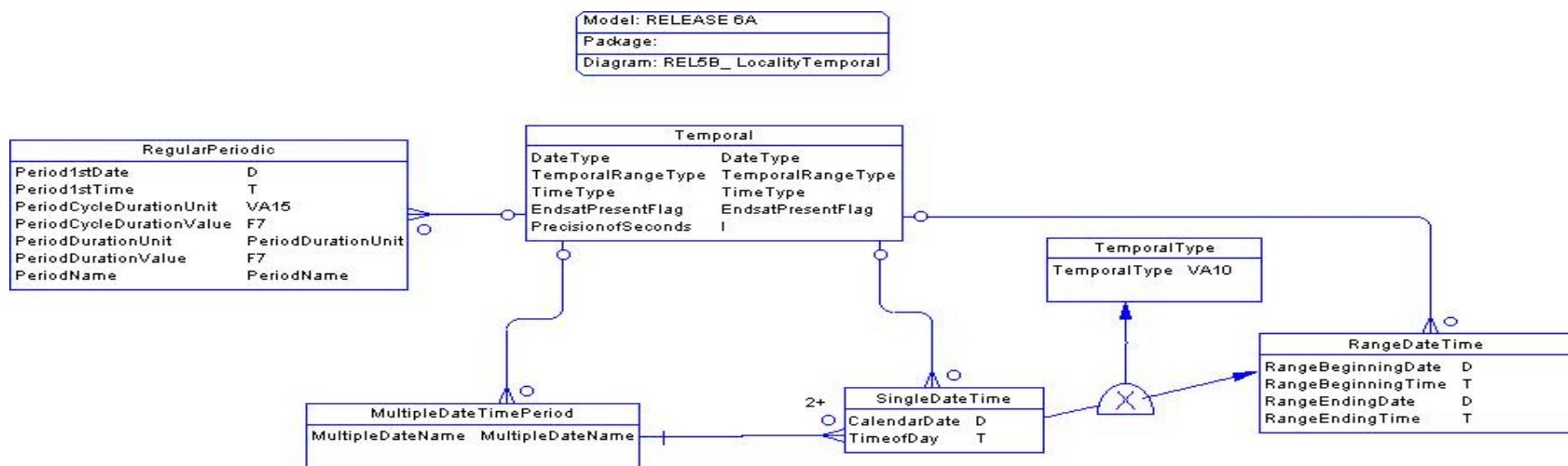
**Figure 2-4. ECSCollection**



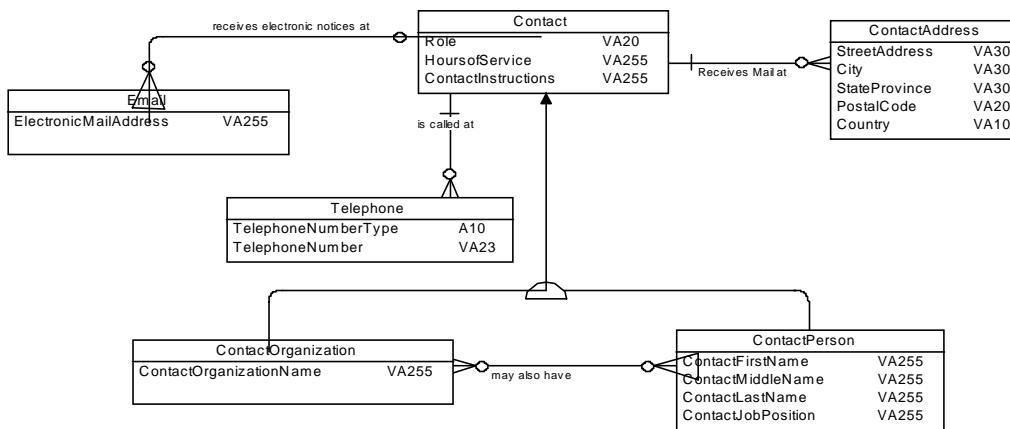
**Figure 2-5. ECSDDataGranule**



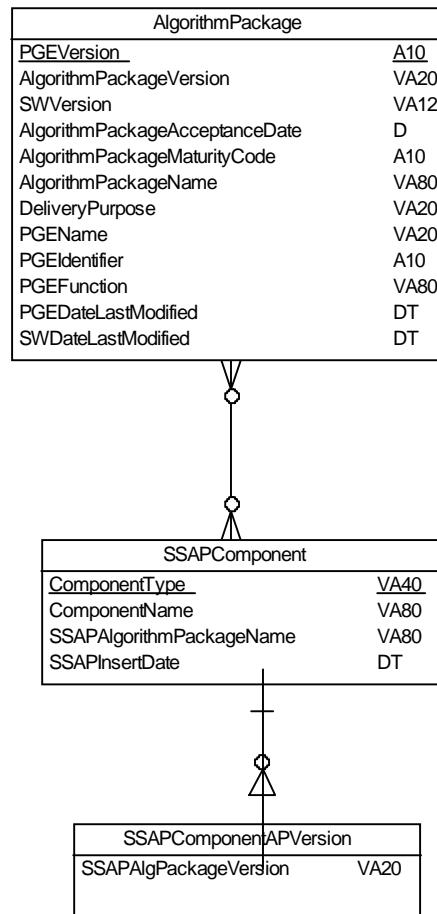
**Figure 2-6. LocalitySpatial**



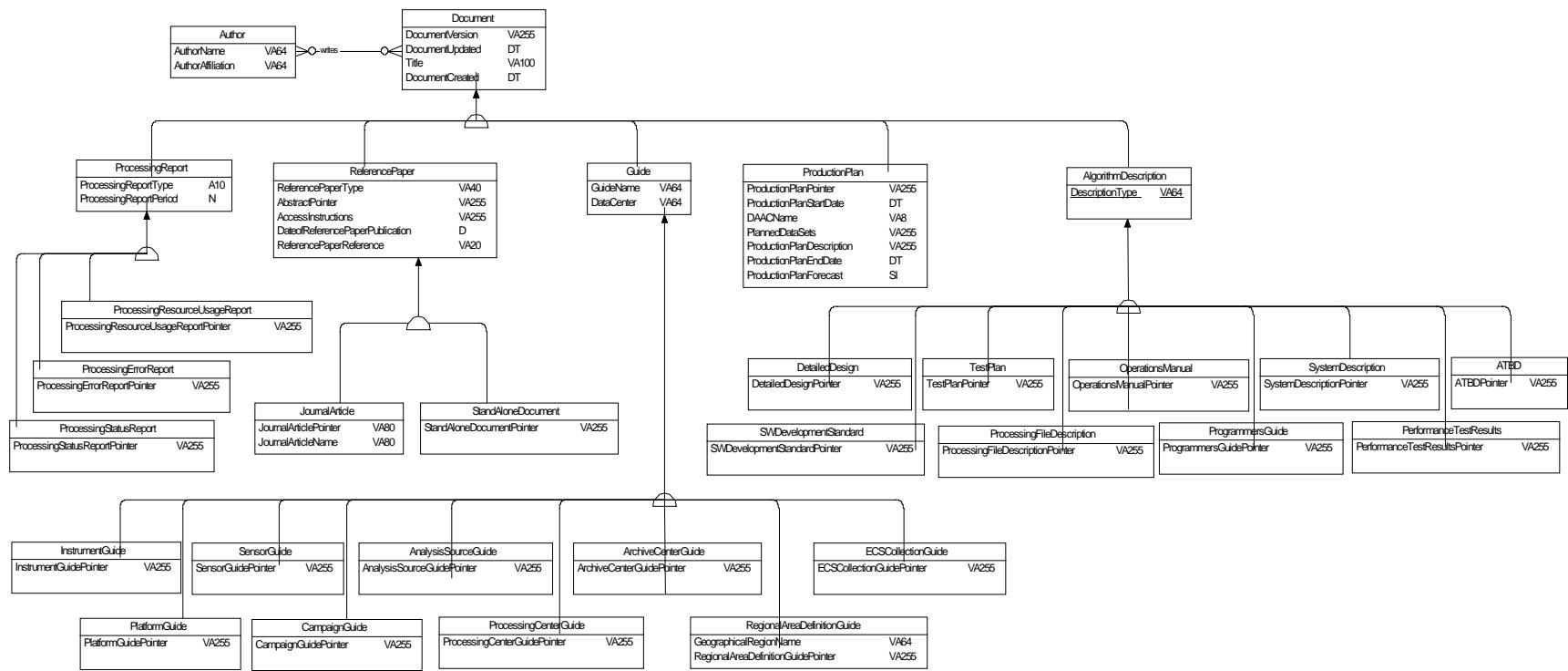
**Figure 2-7. LocalityTemporal**



**Figure 2-8. Contact**



**Figure 2-9. DeliveredAlgorithmPackage**



**Figure 2-10. Document**

### **2.1.1 Class Definitions**

The table below provides a reference list of all classes in the Data Model. Following this table are the class descriptions and list of attributes pertaining to that class.

**Table 2-2. Class Reference Table (1 of 4)**

1. AdditionalAttributes
2. AdvertisementDescription
3. AdvertisementMaster
4. AlgorithmDescription
5. AlgorithmPackage
6. AltitudeSystemDefinition
7. AnalysisSource
8. AnalysisSourceGuide
9. AncillaryInputGranule
10. ArchiveCenterGuide
11. ATBD
12. Author
13. BoundingRectangle
14. Browse
15. Campaign
16. CampaignGuide
17. Circle
18. CollectionAssociation
19. CollectionDescriptionClass
20. Contact
21. ContactAddress
22. ContactOrganization
23. ContactPerson
24. CoordinateRepresentation
25. CoordinateSystemContainer
26. CSDTDescription
27. DepthSystemDefinition
28. DetailedDesign
29. DistanceandBearingRepresentation
30. Document
31. ECSCollection
32. ECSCollectionGuide
33. ECSDataGranule
34. ECSParameter

**Table 2-2. Class Reference Table (2 of 4)**

35. ECSScienceKeywords
36. ECSVariable
37. Email
38. GeodeticModel
39. GeographicCoordinateSystem
40. GPolygon
41. GPolygonContainer
42. GPolygonPoint
43. GranuleLocality
44. GridCoordinateSystem
45. Guide
46. HorizontalCoordinateSystemContainer
47. HorizontalSpatialDomainContainer
48. InformationContent
49. InputGranule
50. InstallableServiceAdvertisement
51. Instrument
52. InstrumentCharacteristic
53. InstrumentCharacteristicValueClass
54. InstrumentGuide
55. JournalArticle
56. LocalCoordinateSystem
57. Locality
58. LocalPlanarCoordinateSystem
59. MapProjection
60. MeasuredParameter
61. MimeServiceAdvertisement
62. MultipleDateTimePeriod
63. MultipleTypeCollection
64. OperationModeClass
65. OperationsManual
66. OrbitCalculatedSpatialDomain
67. OrbitParametersGranule
68. PerformanceTestResults
69. PhysicalParameterDetails
70. PlanarCoordinateInformation
71. PlanarCoordinateSystem
72. PlanarCoordinateSystemContainer
73. Platform

**Table 2-2. Class Reference Table (3 of 4)**

74. PlatformCharacteristic
75. PlatformCharacteristicValueClass
76. PlatformGuide
77. Point
78. ProcessingCenterGuide
79. ProcessingFileDescription
80. ProcessingLevel
81. ProcessingQA
82. ProcessingErrorReport
83. ProcessingReport
84. ProcessingResourceUsageReport
85. ProcessingStatusReport
86. ProductAdvertisement
87. ProductionHistory
88. ProductionPlan
89. ProgrammersGuide
90. ProviderAdvertisement
91. QAFlags
92. QAGranule
93. QAStats
94. QualityTextComment
95. RangeDateTime
96. ReferencePaper
97. RegionalAreaDefinitionGuide
98. RegularPeriodic
99. Review
100. Sensor
101. SensorCharacteristic
102. SensorCharacteristicValueClass
103. SensorGuide
104. ServiceAdvertisement
105. SignatureServiceAdvertisement
106. SingleDateTime
107. SingleTypeCollection
108. Spatial
109. SpatialDomainContainer
110. SpatialKeywordClass
111. SSAPComponent
112. SSAPComponentAPVersion
113. StandAloneDocument
114. StorageMediumClass

**Table 2-2. Class Reference Table (4 of 4)**

115.	SWDevelopmentStandard
116.	SystemDescription
117.	Telephone
118.	Temporal
119.	TemporalKeywordClass
120.	TemporalType
121.	TestPlan
122.	UserCommentDocument
123.	ValidationDocument
124.	VerticalCoordinateSystemContainer
125.	VerticalSpatialDomain
126.	ZoneIdentifierClass

## **AdditionalAttributes**

### **Description**

This class identifies the product specific attributes (i.e. attributes used to describe the unique characteristics of the collection which extend beyond those defined in this model). The 'values' of attributes defined using this mechanism are contained in the class InformationContent.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### **Attribute List**

Name
AdditionalAttributeDatatype
AdditionalAttributeDescription
AdditionalAttributeName

## **AdvertisementDescription**

### **Description**

This class provides a Description of the Advertisement.

### **Attribute List**

Name
SequenceNumber
Description

## **AdvertisementMaster**

### **Description**

Master for all kinds of Advertisements (product, provider and service).

### **Attribute List**

Name
UniqueID
Title
AdvertisementType
StartDate
ExpirationDate
UpperTitle

## **AlgorithmDescription**

### **Description**

A class providing parameter components for search of the documents and software associated with the SSAP.

### **Attribute List**

Name
DescriptionType

## **AlgorithmPackage**

### **Description**

This class provides the common characteristics of the algorithms used in product generation. These characteristics include the algorithm package name, date, version, maturity code and generating system characteristics for the package.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### **Attribute List**

Name
PGEVersion
AlgorithmPackageVersion
SWVersion
AlgorithmPackageAcceptanceDate
AlgorithmPackageMaturityCode
AlgorithmPackageName
DeliveryPurpose
PGEName
PGEIdentifier
PGEFunction
PGEDateLastModified
SWDateLastModified

## **AltitudeSystemDefinition**

### **Description**

The reference frame or system from which altitudes (elevations) are measured. The term 'altitude' is used instead of the common term 'elevation' to conform to the terminology in Federal Information Processing Standards 70-1 and 173. The class contains the datum name, distance units and encoding method, which provide the definition for the system.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
AltitudeDatumName
AltitudeDistanceUnits
AltitudeEncodingMethod
AltitudeResolution

## **AnalysisSource**

### **Description**

This class is used to describe the data acquisition or data processing processes, which characterize a collection. Collections can have both data acquisition and data processing processes associated with them. An example would be a weather analysis collection which included data collected using the NWS ASOS network (PlatformType=Network, PlatformShortName=ASOS) which was processed using an NMC analysis model (e.g. AnalysisType=Model, AnalysisShortName=RAFS, AnalysisDescription=Regional Area Forecast System, AnalysisTechnique= Regional Optimal Interpolation.).

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
AnalysisType
AnalysisLongName
AnalysisShortName
AnalysisTechnique

## **AnalysisSourceGuide**

### **Description**

This class contains a logical pointer to Analysis Source guides.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### **Attribute List**

Name
AnalysisSourceGuidePointer

## **AncillaryInputGranule**

### **Description**

This class contains the logical pointer to the ancillary input used in creation of the granule. Many such objects (i.e., files) may occur per granule.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### **Attribute List**

Name
AncillaryInputType
AncillaryInputPointer

## **ArchiveCenterGuide**

### **Description**

This class contains the logical pointer to the archive center guide.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### **Attribute List**

Name
ArchiveCenterGuidePointer

## **ATBD**

### **Description**

This class contains the logical pointer for the Algorithm Theoretical Basis Document.

### **Attribute List**

Name
ATBDPointer

## **Author**

### **Description**

This class contains the name and affiliation of the author of the document.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0

## **Attribute List**

Name
AuthorName
AuthorAffiliation

## **BoundingRectangle**

### **Description**

This class contains area coverage for ECS collections or granules. This area coverage is expressed by latitude and longitude values in the order western, eastern, northern, and southern - most. For data sets that include a complete band of latitude around the Earth, the west coord = -180.0 and the east= 180.0. Latitude values are -90.0 to +90.0.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
EastBoundingCoordinate
NorthBoundingCoordinate
SouthBoundingCoordinate
WestBoundingCoordinate

## **Browse**

### **Description**

This class contains the Description and size of a Browse product. The logical pointer to the actual Browse product instance is also included in this class. Its association with the collection indicates that it can apply to a collection as a whole while its association with a granule indicates that browse products may also occur one or more per granule.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
BrowsePointer
BrowseSize
BrowseDescription
BrowseProductionDateTime

## **Campaign**

### **Description**

This class contains attributes describing the scientific endeavor(s) to which the collection is associated. Scientific endeavors include campaigns, projects, interdisciplinary science investigations, missions, field experiments, etc.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
CampaignShortName
CampaignStartDate
CampaignEndDate
CampaignLongName

## **CampaignGuide**

### **Description**

This class contains a logical pointer to campaign guides.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
CampaignGuidePointer

## **Circle**

### **Description**

This class identifies the characteristics required to specify the area coverage for a granule or collection as a circle consisting of latitude center, longitude center, radius units, and radius value.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
CenterLatitude
CenterLongitude
RadiusUnits
RadiusValue

## **CollectionAssociation**

### **Description**

This class is used to describe collections associated with the instance of a collection; i.e., the name and other details of input collections, collections associated (in science data terms) with the instance and/or collections dependent on the collection in some way.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
CollectionType
CollectionUse

## **CollectionDescriptionClass**

### **Description**

This class contains brief Description of all collections, also includes the short and long names and the version of the collection.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
LongName
ShortName
CollectionDescription
VersionID

## **Contact**

### **Description**

This class describes the basic characteristics for a person or an organization type of contact. These contacts may provide information about a Collection, Delivered Algorithm Package, PGE or Data Originator. The role attribute specifies the type of contact and serves to differentiate the use of the module for the various classes associated with it from other modules. System and user profile contact information is held elsewhere.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
Role
HoursofService
ContactInstructions

## **Contact Address**

### **Description**

This class contains the address details for each contact.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
StreetAddress
City
StateProvince
PostalCode
Country

## **ContactOrganization**

### **Description**

This class contains the name of the contact organization. This class is used optionally with ContactPerson. In some instances, ContactOrganization is the primary point of contact.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
ContactOrganizationName

## **ContactPerson**

### **Description**

This class contains the contact person's name and position. This class is used optionally with ContactOrganization. In some instances, ContactPerson is the primary point of contact.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
ContactFirstName
ContactMiddleName
ContactLastName
ContactJobPosition

## **CoordinateRepresentation**

### **Description**

This class contains the abscissa and ordinate resolutions for the planar coordinates.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
AbscissaResolution
OrdinateResolution

## **CoordinateSystemContainer**

### **Description**

A container class (no data content) covering the range of descriptive information held at the collection level concerning the spatial system used for each granule in the collection. Primarily used to establish context within the module.

## **CSDTDescription**

### **Description**

The class exists to provide a Description of the data organization of the product (i.e. a generalized granule Description in terms of internal structure). There are many possible structures. All should be describable by one of the PrimaryCSDTs (fixed domain), but the specific Implementation has an unbounded domain indicating the range at the lower structured level. While many CSDTs may exist in a granule, only the primary or dominant CSDT is described (e.g. PrimaryCSDT = swath, Implementation = HDF-EOS). The indirect reference is used for collection specific data organization labels. A comment field is provided for further explanation.

### **Attribute List**

Name
PrimaryCSDT
CSDTComments
Implementation
IndirectReference

## **DepthSystemDefinition**

### **Description**

This class contains the characteristics of the reference frame or system from which depths are measured.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
DepthDatumName
DepthDistanceUnits
DepthEncodingMethod
DepthResolution

## **DetailedDesign**

### **Description**

This class contains the logical pointer to detailed design and/or implementation documents.

## **Attribute List**

Name
DetailedDesignPointer

## **DistanceandBearingRepresentation**

### **Description**

This class contains the resolutions units, direction, and meridian for the planar coordinate system. A method of encoding the position of a point by measuring its distance and direction (azimuth angle) from another point.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

## **Attribute List**

Name
BearingReferenceDirection
BearingReferenceMeridian
BearingResolution
BearingUnits
DistanceResolution

## **Document**

### **Description**

The document class contains common attributes used to specify the title, version, created and update dates for all document types.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### **Attribute List**

Name
DocumentVersion
DocumentUpdated
Title
DocumentCreated

## **ECSCollection**

### **Description**

This class provides further Description of the collection to include media, revision date, usage, and processing and archive centers. It is associated with many other collection level descriptive classes and modules.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### **Attribute List**

Name
ArchiveCenter
ProcessingCenter
RevisionDate
SuggestedUsage
VersionDescription

## **ECSCollectionGuide**

### **Description**

This class contains a logical pointer to collection guides.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### **Attribute List**

Name
ECSCollectionGuidePointer

## **ECSDataGranule**

### **Description**

This class provides the descriptive characteristics associated with a granule.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### **Attribute List**

Name
SizeMBECSDataGranule
ReprocessingActual
ReprocessingPlanned
DayNightFlag
GranulePointer
LocalGranuleID
LocalVersionID
ProductionDateTime
PGEVersion

## **ECSPParameter**

### **Description**

This class contains keywords, associated with the collection, that provide a more specific Description than provided by the class ECSVariable.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### **Attribute List**

Name
ECSPParameterKeyword

## **ECSScienceKeywords**

### **Description**

This class provides the discipline keyword(s) associated with a collection.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR August 2000, Build B.0. Revisions to the Discipline, Topic and Term Classes have been made to consolidate the three classes into one.

### **Attribute List**

Name
ECSDisciplineKeyword
ECSTopicKeyword
ECSTermKeyword

## **ECSVariable**

### **Description**

This class contains the variable keyword(s) associated with the collection. (i.e., upper troposphere temperature, precipitable water, soil depth, albedo).

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### **Attribute List**

Name
ECSVariableKeyword

## **Email**

### **Description**

This class contains the electronic mail address of the contact or document author.

### **Annotation**

311-CD-008-001, May 15, 1996, Release B Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project (with changes from July 1996 to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### **Attribute List**

Name
ElectronicEmailAddress

## **GeodeticModel**

### **Description**

This class contains the parameters describing the shape of the Earth.

### **Attribute List**

Name
DenominatorofFlatteningRatio
EllipsoidName
HorizontalDatumName
SemiMajorAxis

## **GeographicCoordinateSystem**

### **Description**

This class contains the latitude and longitude resolution and coordinate units which define the position of a point on the Earth's surface with respect to a reference spheroid.

### **Attribute List**

Name
GeographicCoordinateUnits
LatitudeResolution
LongitudeResolution

## **GPolygon**

### **Description**

This class contains the G-Ring attribute for the exclusion ring flag which is added to each polygon definition to describe whether the polygon is an 'inner' or 'outer' ring of coverage. Outer rings describe the full coverage extent, while inner rings denote areas of missing coverage within the outer ring.

## **GPolygonContainer**

### **Description**

This class contains the G-Ring characteristics which denote the latitude and longitude of a clockwise series of points, which when connected form a polygon. The minimum number of segments is 3. The exclusion ring flag is added to each polygon definition to describe whether the polygon is an 'inner' or 'outer' ring of coverage- outer rings describe the full coverage extent, while inner rings denote areas of missing of coverage within the outer ring. Each set of values must contain exactly two sets of point values (one for latitude and one for longitude).

## **GPolygonPoint**

### **Description**

This class contains the G-Ring attributes which denote the latitude and longitude of the start point of each of a set of geolocation segments, which when combined form a polygon. The sequence numbers determine how to connect the starting points to form the polygon. Each set of values must contain exactly two sets of point values (one for latitude and one for longitude) and a sequence number.

### **Attribute List**

Name
GRingPointLatitude
GRingPointLongitude
GRingPointSequenceNo

## **GranuleLocality**

### **Description**

This class contains the value for the granules locality.

### **Attribute List**

Name
LocalityValue

## **GridCoordinateSystem**

### **Description**

This class contains the name of the grid coordinate system.

### **Attribute List**

Name
GridCoordinateSystemName

## **Guide**

### **Description**

This class contains the name and data center location of the Guide. This class provides these basic attributes for all guides.

### **Attribute List**

Name
GuideName
DataCenter

## **HorizontalCoordinateSystemContainer**

### **Description**

A container class (no data content). This class is used to add context to the module.

## **HorizontalSpatialDomainContainer**

### **Description**

A container class (no data content). This class is used to add context to the module.

## **InformationContent**

### **Description**

This class captures the actual values associated with the Additional Attribute class. This is an abstract class since the datatype varies depending on the value of AdditionalAttributeDatatype.

### **Attribute List**

Name
ParameterValue

## **InputGranule**

### **Description**

This class contains the logical pointer to the input granule.

### **Attribute List**

Name
InputPointer

## **InstallableServiceAdvertisement**

### **Description**

This class contains the information required to install software related to an installable service.

### **Attribute List**

Name
FtpURL
PackageSize

## **Instrument**

### **Description**

This class defines the device used to measure or record data, including direct human observation. Included in this class are defined EOS Instruments. In cases where instruments have a single sensor or the instrument and sensor are used sysnonomously (e.g. AVHRR) the both Instrument and sensor should be recorded.

### **Attribute List**

Name
InstrumentShortName
NumberofSensors
InstrumentLongName
InstrumentTechnique

## **InstrumentCharacteristic**

### **Description**

This class is used to define the characteristics of instrument specific attributes. It should not be used to define attributes of new objects.

### **Attribute List**

Name
InstrumentCharacteristicUnit
InstrumentCharacteristicDataType
InstrumentCharacteristicDescription
InstrumentCharacteristicName

## **InstrumentCharacteristicValueClass**

### **Description**

This abstract class is intended to capture the value of the attribute defined using the attributes in the class InstrumentCharacteristics. Instrument specific attributes defined in this way may vary by datatype but must be single values.

### **Attribute List**

Name
InstrumentCharacteristicValue

## **InstrumentGuide**

### **Description**

The class contains a logical pointer to instrument guides.

### **Attribute List**

Name
InstrumentGuidePointer

## **JournalArticle**

### **Description**

This class contains the Journal Article name and logical pointer to the article.

### **Attribute List**

Name
JournalArticlePointer
JournalArticleName

## **LocalCoordinateSystem**

### **Description**

This class contains a description of the coordinate system and georeference information.

### **Attribute List**

Name
LocalCoordinateSystemDescription
LocalGeoreferenceInformation

## **Locality**

### **Description**

This class is used at the collection level to describe the labelling of granules with compounded time/space text values and which are subsequently used to define more phenomenologically-based collections, thus the locality type and description are contained in this class.

### **Attribute List**

Name
LocalityType
LocalityDescription

## **LocalPlanarCoordinateSystem**

### **Description**

This class contains a description of the system and georeference information.

### **Attribute List**

Name
LocalPlanarCoordinateSystemDescription
LocalPlanarGeoreferenceInformation

## **MapProjection**

### **Description**

This class contains the name of the map projection [the systematic representation of all or part of the surface of the Earth on a plane or developable surface], and a logical pointer to the map projection details which are specified separately. ECS currently supports a number of projections which are specified separately.

### **Attribute List**

Name
MapProjectionName
MapProjectionPointer

## **MeasuredParameter**

### **Description**

This class contains the name of the geophysical parameter expressed in the data.

### **Attribute List**

Name
ParameterName

## **MimeServiceAdvertisement**

### **Description**

Readable service through web.

### **Attribute List**

Name
ServiceURL

## **MultipleDateTimePeriod**

### **Description**

This class contains the name of the multiple date period. Multiple version of SingleDateTime, generally used at the collection level.

### **Attribute List**

Name
MultipleDateTimeName

## **MultipleTypeCollection**

### **Description**

This class contains the value, relationship and type for the multiple type collection. This class is used only when the collection has been developed by aggregating single type or other multiple type collections and/or granules using criteria which is recorded using the aggregation attributes.

### **Attribute List**

Name
AggregationRelationship
AggregationType
AggregationValue

## **OperationModeClass**

### **Description**

This class identifies the instrument's operational modes associated with the channel, wavelength, and FOV (e.g., launch, survival, initialization, safe, diagnostic, standby, crosstrack, biaxial, solar calibration).

### **Attribute List**

Name
OperationMode

## **OperationsManual**

### **Description**

This class contains a logical pointer to the operations manual.

### **Attribute List**

Name
OperationsManualPointer

## **OrbitCalculatedSpatialDomain**

### **Description**

This class is used to describe the characteristics of the orbit calculated spatial domain to include the model name, orbit number, start and stop orbit number, equator crossing date and time, and equator crossing longitude.

### **Attribute List**

Name
EquatorCrossingDate
EquatorCrossingLongitude
EquatorCrossingTime
OrbitalModelName
OrbitNumber
StartOrbitNumber
StopOrbitNumber

## **OrbitParametersGranule**

### **Description**

This class contains the logical pointer to the orbit parameter granule. This class contains orbit data for which an association with the granule database exists.

### **Attribute List**

Name
OrbitParametersPointer

## **PerformanceTestResults**

### **Description**

This class contains a logical pointer to the performance test results.

### **Attribute List**

Name
PerformanceTestResultsPointer

## **PhysicalParameterDetails**

### **Description**

This class is used to provide further information about the physical or geophysical parameters specified in the AdditionalAttributes and ECSPARAMETERS. It contains the units of measurement, range, accuracy, explanation and resolution.

### **Attribute List**

Name
ParameterMeasurementResolution
ParameterRangeBegin
ParameterUnitsofMeasurement
ParameterValueAccuracy
ParameterValueAccuracyExplanation
ParameterRangeEnd

## **PlanarCoordinateInformation**

### **Description**

This class contains information about the coordinate system developed on the planar surface to include the distance units and encoding method.

### **Attribute List**

Name
PlanarCoordinateEncodingMethod
PlanarDistanceUnits

## **PlanarCoordinateSystem**

### **Description**

This class is used to add context to the module (no data content). This container is made up of the distance and angles, which define the position of a point on a reference plane to which the surface of the Earth has been projected.

## **PlanarCoordinateSystemContainer**

### **Description**

This class is used to add context to the module (no data content). This container is made up of the distance and angles, which define the position of a point on a reference plane to which the surface of the Earth has been projected.

## **Platform**

### **Description**

This class describes the relevant platforms associated with the acquisition of the collection or granule. Platform types include Spacecraft, Aircraft, Vessel, Buoy, Platform, Station, Network or Human. In cases where Human is the platform type it should be of scientific relevancy to the collection. If an instrument is hand held and that is relevant to the collection of the data then PlatformType=Human. In cases where an instrument is hand-held but the human is associated with another platform then all relevant platforms should be associated with the collection. Humans can be both Platforms and Instruments (e.g. if a human is standing on the ground and makes a visual observation then: PlatformType=Human, Instrument=HumanObservation, SensorShortName=HumanVisual).

### **Attribute List**

Name
PlatformShortName
PlatformType
PlatformLongName

## **PlatformCharacteristic**

### **Description**

This class is used to define the characteristics of platform specific attributes. It should not be used to define attributes of new objects.

### **Attribute List**

Name
PlatformCharacteristicName
PlatformCharacteristicUnit
PlatformCharacteristicDataType
PlatformCharacteristicDescription

## **PlatformCharacteristicValueClass**

### **Description**

This abstract class is intended to capture the value of the attribute defined using the attributes in the class PlatformCharacteristics. Platform specific attributes defined in this way may vary by datatype but must be single values.

### **Attribute List**

Name
PlatformCharacteristicValue

## **PlatformGuide**

### **Description**

This class contains a logical pointer to platform guides.

### **Attribute List**

Name
PlatformGuidePointer

## **Point**

### **Description**

This class identifies the characteristics of the point area coverage to include the latitude and longitude.

### **Attribute List**

Name
PointLatitude
PointLongitude

## **ProcessingCenterGuide**

### **Description**

This class contains a logical pointer to processing center guides.

### **Attribute List**

Name
ProcessingCenterGuidePointer

## **ProcessingFileDescription**

### **Description**

This class contains a logical pointer to the processing file description which details the file and record layouts for each PGE.

### **Attribute List**

Name
ProcessingFileDescriptionPointer

## **ProcessingLevel**

### **Description**

The processing level class contains the level identifier and level description of the collection.

### **Attribute List**

Name
ProcessingLevelDescription
ProcessingLevelID

## **ProcessingQA**

### **Description**

This class contains the name of the attribute in error in addition to a brief description of the error that occurred during processing.

### **Attribute List**

Name
ProcessingQADescription
ProcessingQAAttribute

## **ProcessingErrorReport**

### **Description**

This class contains a logical pointer to the processing error report which is produced by the ECS Planning Subsystem.

### **Attribute List**

Name
ProcessingErrorReportPointer

## **ProcessingReport**

### **Description**

This class contains the type and period of the processing report which is produced by the ECS Planning Subsystem.

### **Attribute List**

Name
ProcessingReportType
ProcessingReportPeriod

## **ProcessingResourceUsageReport**

### **Description**

This class contains the logical pointer to the processing resource usage report.

### **Attribute List**

Name
ProcessingResourceUsageReportPointer

## **ProcessingStatusReport**

### **Description**

This class contains a logical pointer to the processing status report produced by the ECS Planning Subsystem.

### **Attribute List**

Name
ProcessingStatusReportPointer

## **ProductAdvertisement**

### **Description**

Advertisement about the data in ECS or non-ECS data

## **ProductionHistory**

### **Description**

The Processing History class contains a logical pointer to the processing history which provides information about the processing of each granule associated with the granule database. This includes the input products and granules used to generate the product.

### **Attribute List**

Name
ProductionHistoryPointer

## **ProductionPlan**

### **Description**

This class contains the dates, forecast, description, and planned data sets associated with the production plan in addition to the logical pointer to the production plan. This class has searchable attributes plus a pointer to a specification for the plans produced by the ECS Planning Subsystem.

## **Attribute List**

Name
ProductionPlanPointer
ProductionPlanStartDate
DAACName
PlannedDataSets
ProductionPlanDescription
ProductionPlanEndDate
ProductionPlanForecast

## **ProgrammersGuide**

### **Description**

This class contains the logical pointer to the programmers guide.

## **Attribute List**

Name
ProgrammersGuidePointer

## **ProviderAdvertisement**

### **Description**

This class describes the person or organization that provides the Advertisement. This class must be populated if ServiceAdvertisement or ProductAdvertisement are populated.

## **Attribute List**

Name
ProviderURL

## **QAFlags**

### **Description**

This class contains the science, operational and automatic quality flags which indicate the overall quality assurance levels of specific parameter values within a granule.

### **Attribute List**

Name
AutomaticQualityFlag
OperationalQualityFlag
ScienceQualityFlagExplanation
ScienceQualityFlag
OperationalQualityFlagExplanation
AutomaticQualityFlagExplanation

## **QAGranule**

### **Description**

This class specifies the logical pointer to the QA granule. This class contains material for a separate file or files containing user specified QA information about the granule.

### **Attribute List**

Name
QAGranulePointer

## **QAStats**

### **Description**

This class contains measures of quality for the granule. The parameters used to set these measures are not preset and will be determined by the data producer. Each set of measures can occur many times either for the granule as a whole or for individual parameters.

### **Attribute List**

Name
QAPercentInterpolatedData
QAPercentMissingData
QAPercentOutofBoundsData
QAPercentCloudCover

## **QualityTextComment**

### **Description**

A class containing a logical pointer to documents which record details of quality measurement and other comments concerning the collection.

### **Attribute List**

Name
QualityTextCommentPointer

## **RangeDateTime**

### **Description**

This class specifies the start and end date/time of a granule or collection.

### **Attribute List**

Name
RangeBeginningDate
RangeBeginningTime
RangeEndingDate
RangeEndingTime

## **ReferencePaper**

### **Description**

The reference paper class defines the common properties of the underlying reference material, and inherits further attributes from the Document Class.

### **Attribute List**

Name
ReferencePaperType
AbstractPointer
AccessInstructions
DateofReferencePaperPublication
ReferencePaperReference

## **RegionalAreaDefinitionGuide**

### **Description**

This class contains the geographic region name and the logical pointer to the regional area definition guides.

### **Attribute List**

Name
GeographicalRegionName
RegionalAreaDefinitionGuidePointer

## **RegularPeriodic**

### **Description**

This class contains the name of the temporal period in addition to the date, time, duration unit, and value, and cycle duration unit and value. Used at the collection level to describe a collection having granules which cover a regularly occurring period.

## **Attribute List**

Name
Period1stDate
Period1stTime
PeriodCycleDurationUnit
PeriodCycleDurationValue
PeriodDurationUnit
PeriodDurationValue
PeriodName

## **Review**

### **Description**

This class provides for dates and status as applicable for collections which are active.

## **Attribute List**

Name
FutureReviewDate
ScienceReviewDate
ScienceReviewStatus

## **Sensor**

### **Description**

This class is used to describe sensory subcomponents of an instrument. In cases where instruments have a single sensor or the Instrument and Sensor are used synonymously (e.g. AVHRR) both the Instrument and Sensor should be recorded.

## **Attribute List**

Name
SensorShortName
SensorLongName
SensorTechnique

## **SensorCharacteristic**

### **Description**

This class is used to define the characteristics of sensor specific attributes. It should not be used to define attributes of new objects.

### **Attribute List**

Name
SensorCharacteristicUnit
SensorCharacteristicDataType
SensorCharacteristicDescription
SensorCharacteristicName

## **SensorCharacteristicValueClass**

### **Description**

This abstract class is intended to capture the value of the attribute defined using the attributes in the class SensorCharacteristics. Sensor specific attributes defined in this way may vary by datatype but must be single values.

### **Attribute List**

Name
SensorCharacteristicValue

## **SensorGuide**

### **Description**

This class contains a logical pointer to the sensor guides.

### **Attribute List**

Name
SensorGuidePointer

## **ServiceAdvertisement**

### **Description**

Description of software typically accessing data found in ProductAdvertisement

## **SignatureServiceAdvertisement**

### **Description**

This class contains information that describes services, which are executed using an argument list.

### **Attribute List**

Name
ServiceClass
ServiceName
GIParameterList
AdvertisementUR
Internal Name

## **SingleDateTime**

### **Description**

This class contains the time of day and calendar date for an ECS granule. This class provides a means of encoding a single date and time for a granule occurring at that time or during the period covered by the time (e.g. one day for a single date excluding the time within the day).

### **Attribute List**

Name
CalendarDate
TimeOfDay

## **SingleTypeCollection**

### **Description**

This class provides a description specific to a single, as opposed to a multitype collection, to include citation of external publication, collection state, maintenance and update frequency, and access constraints. The definition of a singletype collection is stated below. The management and development of singletype collections is the subject of other documentation. A single type collection contains a set of granules for which the dominant variation in the value of metadata attributes is in the space and time attributes. For example, most level 0, 1, and many level 2 collections conform to this definition.

### **Attribute List**

Name
AccessConstraints
CitationforExternalPublication
CollectionState
MaintenanceandUpdateFrequency

## **Spatial**

### **Description**

Largely a container class, but carrying an attribute indicating the general type of coverage.

### **Attribute List**

Name
SpatialCoverageType

## **SpatialDomainContainer**

### **Description**

A container class (no data content) used to add context to the module.

## **SpatialKeywordClass**

### **Description**

This class contains the spatial keywords associated with the ECS collection.

### **Attribute List**

Name
SpatialKeyword

## **SSAPComponent**

### **Description**

Defines a piece of an SSAP (Science Software Algorithm Package).

### **Attribute List**

Name
ComponentType
ComponentName
SSAPAlgorithmPackageName
SSAPInsertDate

## **SSAPComponentAPVersion**

### **Description**

Defines the versions (of the Algorithm Package) associated with a software component.

### **Attribute List**

Name
SSAPAlgPackageVersion

## **StandAloneDocument**

### **Description**

This class contains the logical pointer to the stand alone document which is a document not published in journals.

### **Attribute List**

Name
StandAloneDocumentPointer

## **StorageMediumClass**

### **Description**

This class contains the medium on which the data are stored.

### **Attribute List**

Name
StorageMedium

## **SWDevelopmentStandard**

### **Description**

This class contains a logical pointer to the software development standard. Separate document.

### **Attribute List**

Name
SWDevelopmentStandardPointer

## **SystemDescription**

### **Description**

Separately specified, description of science software processing system.

### **Attribute List**

Name
SystemDescriptionPointer

## **Telephone**

### **Description**

This class contains the telephone details associated with the contact.

### **Attribute List**

Name
TelephoneNumberType
TelephoneNumber

## **Temporal**

### **Description**

This class contains attributes which describe the basis of the time system used in other classes.

### **Attribute List**

Name
DateType
TemporalRangeType
TimeType
EndsAtPresentFlag
PrecisionofSeconds

## **TemporalKeywordClass**

### **Description**

This class identifies the type of temporal characterization for a granule or collection.

### **Attribute List**

Name
TemporalKeyword

## **TemporalType**

### **Description**

This class contains the type (range or single) of temporal being used for a granule or collection.

### **Attribute List**

Name
TemporalType

## **TestPlan**

### **Description**

This class contains the logical pointer to the test plan for the PGE.

### **Attribute List**

Name
TestPlanPointer

## **UserCommentDocument**

### **Description**

A class containing a logical pointer to documents used to record user comments on the collection

### **Attribute List**

Name
UserCommentDocumentPointer

## **ValidationDocument**

### **Description**

A class containing a logical pointer to a document used to record details of validation steps used for the assessment of granule and overall collection quality.

### **Attribute List**

Name
ValidationDocumentPointer

## **VerticalCoordinateSystemContainer**

### **Description**

A container class (no data content). This class is used to add context to the module. The reference frame or system from which vertical distances (altitudes or depths are measured).

## **VerticalSpatialDomain**

### **Description**

This class contains the domain value and type for the vertical spatial domain.

### **Attribute List**

Name
VerticalSpatialDomainType
VerticalSpatialDomainValue

## **ZoneIdentifierClass**

### **Description**

This class contains the zone identifier of the various zones in the associated grid coordinate system. See domain values of coordinate system for constraints on the zone numbers.

### **Attribute List**

Name
ZoneIdentifier

## 2.2 Earth Science Metadata Specifications

Descriptions of the attribute specifications found within the Power Designor tool are presented in the following section. Each attribute will contain all relevant information for that attribute.

Table 2-2 provides an attribute with appropriate datatypes (DT).

### Data Item List

**Table 2-3. Attribute Reference (1 of 8)**

Name	Data Type
1. AbscissaResolution	F7
2. AbstractPointer	VA255
3. AccessConstraints	VA255
4. Access Instructions	VA255
5. AdditionalAttributeDatatype	A10
6. AdditionalAttributeDescription	VA255
7. AdditionalAttributeName	VA40
8. AdvertisementType	VA80
9. AdvertisementUR	TXT
10. AggregationRelationship	VA2
11. AggregationType	VA20
12. AggregationValue	VA80
13. AlgorithmPackageAcceptanceDate	DT
14. AlgorithmPackageMaturityCode	A10

**Table 2-3. Attribute Reference (2 of 8)**

Name	Data Type
15. AlgorithmPackageName	VA80
16. AlgorithmPackageVersion	VA20
17. AltitudeDatumName	VA40
18. AltitudeDistanceUnits	VA20
19. AltitudeEncodingMethod	VA255
20. AltitudeResolution	F
21. AnalysisLongName	VA80
22. AnalysisShortName	VA20
23. AnalysisSourceGuidePointer	VA255
24. AnalysisTechnique	VA80
25. AnalysisType	VA20
26. AncillaryInputPointer	VA255
27. AncillaryInputType	VA20
28. ArchiveCenter	VA20
29. ArchiveCenterGuidePointer	VA255
30. ATBDPointer	VA255
31. AuthorAffiliation	VA64
32. AuthorName	VA64
33. AutomaticQualityFlag	VA64
34. AutomaticQualityFlagExplanation	VA255
35. BearingReferenceDirection	VA20
36. BearingReferenceMeridian	VA255
37. BearingResolution	F16
38. BearingUnits	VA255
39. BrowseDescription	VA255
40. BrowsePointer	VA255
41. BrowseProductionDateTime	DT
42. BrowseSize	F5
43. CalendarDate	DT
44. CampaignEndDate	DT
45. CampaignGuidePointer	VA255
46. CampaignLongName	VA80
47. CampaignShortName	VA20
48. CampaignStartDate	DT
49. CenterLatitude	LF
50. CenterLongitude	LF
51. CitationforExternalPublication	VA255
52. City	VA30
53. CollectionDescription	VA255
54. CollectionState	A10

**Table 2-3. Attribute Reference (3 of 8)**

Name	Data Type
55. CollectionType	VA20
56. CollectionUse	VA500
57. ComponentName	VA80
58. ComponentType	VA40
59. ContactFirstName	VA255
60. ContactInstructions	VA255
61. ContactJobPosition	VA255
62. ContactLastName	VA255
63. ContactMiddleName	VA255
64. ContactOrganizationName	VA255
65. Country	VA10
66. CSDTComments	VA255
67. DAACName	VA8
68. DataCenter	VA64
69. DateofReferencePaperPublication	D
70. DateType	A10
71. DayNightFlag	A5
72. DeliveryPurpose	VA20
73. DenominatorofFlatteningRatio	F5
74. DepthDatumName	VA80
75. DepthDistanceUnits	VA20
76. DepthEncodingMethod	VA255
77. DepthResolution	F7
78. Description	VA255
79. DescriptionType	VA64
80. DetailedDesignPointer	VA255
81. DistanceResolution	F7
82. DocumentCreated	DT
83. DocumentUpdated	DT
84. DocumentVersion	VA255
85. EastBoundingCoordinate	LF
86. ECSCollectionGuidePointer	VA255
87. ECSDisciplineKeyword	VA24
88. ECSParameterKeyword	VA80
89. ECSTermKeyword	VA50
90. ECSTopicKeyword	VA32
91. ECSVariableKeyword	VA80
92. ElectronicMailAddress	VA255
93. EllipsoidName	VA255
94. EndsatPresentFlag	A1

**Table 2-3. Attribute Reference (4 of 8)**

Name	Data Type
95. EquatorCrossingDate	DT
96. EquatorCrossingLongitude	F11
97. EquatorCrossingTime	T
98. ExclusionGRingFlag	A1
99. ExpirationDate	DT
100. FtpURL	VA100
101. FutureReviewDate	DT
102. GeographicalRegionName	VA64
103. GeographicCoordinateDescription	VA255
104. GeographicCoordinateInformation	VA255
105. GeographicCoordinateUnits	VA80
106. GIParameterList	TXT
107. GranulePointer	VA255
108. GridCoordinateSystemName	VA255
109. GRingPointLatitude	LF
110. GRingPointLongitude	LF
111. GRingPointSequenceNo	I
112. GuideName	VA64
113. HorizontalDatumName	VA30
114. HoursOfService	VA255
115. Implementation	VA100
116. IndirectReference	VA100
117. InputPointer	VA255
118. InstrumentCharacteristicDataType	A8
119. InstrumentCharacteristicDescription	VA80
120. InstrumentCharacteristicName	VA40
121. InstrumentCharacteristicUnit	VA20
122. InstrumentCharacteristicValue	VA15
123. InstrumentGuidePointer	VA255
124. InstrumentLongName	VA80
125. InstrumentShortName	VA20
126. InstrumentTechnique	VA80
127. Internal Name	VA100
128. JournalArticleName	VA80
129. JournalArticlePointer	VA80
130. LatitudeResolution	F
131. LocalCoordinateSystemDescription	VA255
132. LocalGeoreferenceInformation	VA255
133. LocalGranuleID	VA80
134. LocalityDescription	VA255

**Table 2-3. Attribute Reference (5 of 8)**

Name	Data Type
135. LocalityType	VA20
136. LocalityValue	VA80
137. LocalPlanarCoordinateSystemDescription	VA255
138. LocalPlanarGeoreferenceInformation	VA255
139. LocalVersionID	VA60
140. LongitudeResolution	F
141. LongName	VA80
142. MaintenanceandUpdateFrequency	VA80
143. MapProjectionName	VA80
144. MapProjectionPointer	VA255
145. MultipleDateName	VA30
146. NorthBoundingCoordinate	LF
147. NumberofSensors	I
148. OperationalQualityFlag	VA20
149. OperationalQualityFlagExplanation	VA255
150. OperationMode	VA20
151. OperationsManualPointer	VA80
152. OrbitalModelName	VA80
153. OrbitNumber	I
154. OrbitParametersPointer	VA255
155. OrdinateResolution	F7
156. PackageSize	I
157. ParameterMeasurementResolution	VA30
158. ParameterName	VA40
159. ParameterRangeBegin	VA40
160. ParameterRangeEnd	VA40
161. ParameterUnitsofMeasurement	VA20
162. ParameterValue	VA255
163. ParameterValueAccuracy	VA30
164. ParameterValueAccuracyExplanation	VA255
165. PerformanceTestResultsPointer	VA255
166. Period1stDate	DT
167. Period1stTime	T
168. PeriodCycleDurationUnit	VA15
169. PeriodCycleDurationValue	F7
170. PeriodDurationUnit	VA15
171. PeriodDurationValue	F7
172. PeriodName	VA30
173. PGEDateLastModified	DT
174. PGEFunction	VA80

**Table 2-3. Attribute Reference (6 of 8)**

Name	Data Type
175. PGElIdentifier	A10
176. PGEName	VA20
177. PGEVersion	A10
178. PlanarCoordinateEncodingMethod	VA80
179. PlanarCoordinateInformation	VA255
180. PlanarDistanceUnits	VA80
181. PlannedDataSets	VA255
182. PlatformCharacteristicDataType	A8
183. PlatformCharacteristicDescription	VA80
184. PlatformCharacteristicName	VA40
185. PlatformCharacteristicUnit	VA20
186. PlatformCharacteristicValue	VA20
187. PlatformGuidePointer	VA255
188. PlatformLongName	VA80
189. PlatformShortName	VA20
190. PlatformType	VA20
191. PointLatitude	LF
192. PointLongitude	LF
193. PostalCode	VA20
194. PrecisionofSeconds	I
195. PrimaryCSDT	VA30
196. ProcessingCenter	VA20
197. ProcessingCenterGuidePointer	VA255
198. ProcessingErrorReportPointer	VA255
199. ProcessingFileDescriptionPointer	VA255
200. ProcessingLevelDescription	VA80
201. ProcessingLevelID	A6
202. ProcessingQAAtribute	VA80
203. ProcessingQADescription	VA255
204. ProcessingReportPeriod	N
205. ProcessingReportType	A10
206. ProcessingResourceUsageReportPointer	VA255
207. ProcessingStatusReportPointer	VA255
208. ProductionDateTime	DT
209. ProductionHistoryPointer	VA255
210. ProductionPlanDescription	VA255
211. ProductionPlanEndDate	DT
212. ProductionPlanForecast	SI
213. ProductionPlanPointer	VA255
214. ProductionPlanStartDate	DT

**Table 2-3. Attribute Reference (7 of 8)**

Name	Data Type
215. ProgrammersGuidePointer	VA255
216. ProviderURL	VA255
217. QAGranulePointer	VA255
218. QAPercentCloudCover	I
219. QAPercentInterpolatedData	I
220. QAPercentMissingData	I
221. QAPercentOutofBoundsData	I
222. QualityTextCommentPointer	VA255
223. RadiusUnits	A10
224. RadiusValue	F
225. RangeBeginningDate	DT
226. RangeBeginningTime	T
227. RangeEndingDate	DT
228. RangeEndingTime	T
229. ReferencePaperReference	VA20
230. ReferencePaperType	VA40
231. RegionalAreaDefinitionGuidePointer	VA255
232. ReprocessingActual	VA20
233. ReprocessingPlanned	VA45
234. RevisionDate	DT
235. Role	VA20
236. ScienceQualityFlag	VA25
237. ScienceQualityFlagExplanation	VA255
238. ScienceReviewDate	DT
239. ScienceReviewStatus	VA20
240. SemiMajorAxis	F8
241. SensorCharacteristicDataType	A8
242. SensorCharacteristicDescription	VA80
243. SensorCharacteristicName	VA40
244. SensorCharacteristicUnit	VA20
245. SensorCharacteristicValue	VA80
246. SensorGuidePointer	VA255
247. SensorLongName	VA80
248. SensorShortName	VA20
249. SensorTechnique	VA80
250. SequenceNumber	I
251. ServiceClass	VA100
252. ServiceName	VA100
253. ServiceURL	VA100
254. ShortName	A8

**Table 2-3. Attribute Reference (8 of 8)**

Name	Data Type
255. SizeMBECSDataGranule	F10
256. SouthBoundingCoordinate	LF
257. SpatialCoverageType	A10
258. SpatialKeyword	VA40
259. SSAPAlgorithmPackageName	VA80
260. SSAPAlgPackageVersion	VA20
261. SSAPIInsertDate	DT
262. StandAloneDocumentPointer	VA255
263. StartDate	DT
264. StartOrbitNumber	I
265. StateProvince	VA30
266. StopOrbitNumber	I
267. StorageMedium	VA30
268. StreetAddress	VA80
269. SuggestedUsage	VA500
270. SWDateLastModified	DT
271. SWDevelopmentStandardPointer	VA255
272. SWVersion	VA12
273. SystemDescriptionPointer	VA255
274. TelephoneNumber	VA23
275. TelephoneNumberType	A10
276. TemporalKeyword	VA40
277. TemporalRangeType	VA30
278. TemporalType	VA10
279. TestPlanPointer	VA255
280. TimeOfDay	T
281. TimeType	A10
282. Title	VA100
283. UniqueID	N8
284. UpperTitle	VA100
285. UserCommentDocumentPointer	VA255
286. ValidationDocumentPointer	VA255
287. VersionDescription	VA255
288. VersionID	SI
289. VerticalSpatialDomainType	VA20
290. VerticalSpatialDomainValue	VA20
291. WestBoundingCoordinate	LF
292. ZoneIdentifier	VA64

## **AbscissaResolution**

### **Description**

The (nominal) minimum distance between the 'x' or column values of two adjacent points, expressed in Planar Distance Units of measure. Planar Distance Units of measure are units used for distances whose domain values are meters, international feet, and survey feet.

Content Source: DP

Constraints: AbscissaResolution > 0.0

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
CoordinateRepresentation

## **AbstractPointer**

### **Description**

Pointer to the reference paper article abstract.

Content Source: DP

Constraints: if abstract exists (must for all papers), this must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ReferencePaper

## **AccessConstraints**

### **Description**

Restrictions and legal prerequisites for accessing the collection. These include any access constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on obtaining the collection.

These restrictions differ from Use Restrictions in that they only apply to access.  
Content Source: DP; DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
SingleTypeCollection

### **Description**

Free Text

Unknown

None

## **Access Instructions**

### **Description**

Instructions describing how to obtain electronic access to a stand-alone document. May simply be an anonymous ftp site address, or a World Wide Web homepage URL. Data Provider Sites may establish additional instruction requirements.

Content Source: DP; DAAC

Constraints: if reference papers utilized, this must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ReferencePaper

### **Description**

Free Text

## **AdditionalAttributeDatatype**

### **Description**

Data type of ParameterValue.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
AdditionalAttributes

### **Description**

int

varchar

float

date

time

datetime

## **AdditionalAttributeDescription**

### **Description**

This attribute provides a description for the AdditionalAttributeName.

Content Source: DP

Constraints: If AdditionalAttributeName exists then AdditionalAttribute must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
AdditionalAttributes

## **Description**

Free Text

## **AdditionalAttributeName**

### **Description**

Data type of AdditionalAttributeName.

Content Source: DP

Constraints: If AdditionalAttributeName exists then AdditionalAttributeDatatype must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
AdditionalAttributes

## **Description**

ALBEDOTABLEID

AVERAGEREFLDISCRIMINATION

AVERAGERMSE

AscendingDescendingFlg

AveragedBlackbodyTemperature

BAND1\_GAIN

BAND1\_GAIN\_CHANGE

BAND1\_SL\_GAIN\_CHANGE

BAND2\_GAIN

BAND2\_GAIN\_CHANGE

BAND2\_SL\_GAIN\_CHANGE

BAND3\_GAIN

BAND3\_GAIN\_CHANGE

BAND3\_SL\_GAIN\_CHANGE

BAND4\_GAIN

BAND4\_GAIN\_CHANGE

BAND4\_SL\_GAIN\_CHANGE  
BAND5\_GAIN  
BAND5\_GAIN\_CHANGE  
BAND5\_SL\_GAIN\_CHANGE  
BAND6\_GAIN\_CHANGE\_F1  
BAND6\_GAIN\_CHANGE\_F2  
BAND6\_GAIN\_F1  
BAND6\_GAIN\_F2  
BAND6\_SL\_GAIN\_CHANGE\_F1  
BAND6\_SL\_GAIN\_CHANGE\_F2  
BAND7\_GAIN  
BAND7\_GAIN\_CHANGE  
BAND7\_SL\_GAIN\_CHANGE  
BAND8\_GAIN  
BAND8\_GAIN\_CHANGE  
BAND8\_SL\_GAIN\_CHANGE  
BRDFCODEID  
CLOUDPERCENT  
CirrusCloudDetectedPct\_IR  
ClearPct250m  
CloudCoverFractionPct\_VIS  
CloudCoverPct250m  
CloudPct\_IR  
CloudPhaseUncertainPct\_IR  
DayProcessedPct  
ECOREGIONLABELS  
ECSMSDBAArchivedOn  
ECSMSDBADatabaseName  
ECSMSDBADatafileName  
ECSMSDBASchemaVersionID  
ECSMSDBAServerName  
ECSMSDBATableName  
ECSMSDBATablesetName  
ECSMSSLGHostName  
ECSMSSLGMode  
EndDataDay  
ExeInsertDate  
ExePGENAME  
ExePGESSWVersion  
ExePlatformOS  
ExePlatformOSVersion  
FIREPIXELS  
FailedPGEInsertDateTime

FailedPGEName  
FailedPGEVersion  
F1\_F2\_SCENE\_CORNERS  
GLOBALECOTYPE1ACCURACY  
GLOBALECOTYPE1ACCURACYTABLE  
GLOBALECOTYPE1KAPPA  
GLOBALECOTYPE2ACCURACY  
GLOBALECOTYPE2ACCURACYTABLE  
GLOBALECOTYPE2KAPPA  
GLOBALLANDCOVERACCURACY  
GLOBALLANDCOVERACCURACYTABLE  
GLOBALLANDCOVERKAPPA  
GRANULENUMBER  
HighCloudDetectedPct\_IR  
HighConfidentClearPct  
IceCloudDetectedPct\_IR  
IceCloudDetectedPct\_VIS  
LANDCOVERCLASSESPRESENTINTILE  
LandCoverFractionPct  
LandProcessedPct  
LowCloudDetectedPct\_IR  
LowConfidentClearPct  
MODELDEFFILEID  
MaxSolarZenithAngle  
MidCloudDetectedPct\_IR  
MinSolarZenithAngle  
MixedCloudDetectedPct\_IR  
NightProcessedPct  
NonCloudObstructionFoundPct  
ORIG\_PARTIAL\_WRS\_SCENES  
ORIG\_TOTAL\_WRS\_SCENES  
OceanCoverFractionPct  
OpaqueCloudDetectedPct\_IR  
PCD\_START\_TIME  
PCD\_STOP\_TIME  
PDS\_ID  
PERCENTANCREFS  
PERCENTBARE  
PERCENTBROADLEAF  
PERCENTCHANGEDPIXELS  
PERCENTDECIDUOUS  
PERCENTEVERGREEN  
PERCENTFOREST

PERCENTHERBACEOUS  
PERCENTLANDINTILE  
PERCENTMODELFIXEDBRDFS  
PERCENTMODERATEQUALITY  
PERCENTNEARNADIR15REFS  
PERCENTNEEDLELEAF  
PERCENTNEWBRDFS  
PERCENTNONFORESTVEG  
PERCENTNOTPRODUCED  
PERCENTPOORQUALITY  
PERCENTSHAPEFIXEDBRDFS  
PERCENTSUBSTITUTEBRDFS  
PERCENTWOODY  
PRODUCT\_LL\_CORNER\_LAT  
PRODUCT\_LL\_CORNER\_LON  
PRODUCT\_LR\_CORNER\_LAT  
PRODUCT\_LR\_CORNER\_LON  
PRODUCT\_UL\_CORNER\_LAT  
PRODUCT\_UL\_CORNER\_LON  
PRODUCT\_UR\_CORNER\_LAT  
PRODUCT\_UR\_CORNER\_LON  
QAPERCENTGOODQUALITY  
QAPERCENTNOTPRODUCEDCLOUD  
QAPERCENTNOTPRODUCEDOTHER  
QAPERCENTOTHERQUALITY  
QAPERCENTPOOROUTPUT1KMBAND1  
QAPERCENTPOOROUTPUT1KMBAND2  
QAPERCENTPOOROUTPUT1KMBAND3  
QAPERCENTPOOROUTPUT1KMBAND4  
QAPERCENTPOOROUTPUT1KMBAND5  
QAPERCENTPOOROUTPUT1KMBAND6  
QAPERCENTPOOROUTPUT1KMBAND7  
QAPERCENTPOOROUTPUT250MBAND1  
QAPERCENTPOOROUTPUT250MBAND2  
QAPERCENTPOOROUTPUT500MBAND1  
QAPERCENTPOOROUTPUT500MBAND2  
QAPERCENTPOOROUTPUT500MBAND3  
QAPERCENTPOOROUTPUT500MBAND4  
QAPERCENTPOOROUTPUT500MBAND5  
QAPERCENTPOOROUTPUT500MBAND6  
QAPERCENTPOOROUTPUT500MBAND7  
QAPERCENTPOORQ1KM16DAYEVI  
QAPERCENTPOORQ1KM16DAYNDVI

QAPERCENTPOORQ1KMMONTHEVI  
QAPERCENTPOORQ1KMMMONTHNDVI  
QAPERCENTPOORQ250M16DAYNDVI  
QAPERCENTPOORQCMG16DAYEVI  
QAPERCENTPOORQCMG16DAYNDVI  
QAPERCENTPOORQCMGMONTHEVI  
QAPERCENTPOORQCMGMONTNDVI  
QA\_BAND1\_PRESENT  
QA\_BAND2\_PRESENT  
QA\_BAND3\_PRESENT  
QA\_BAND4\_PRESENT  
QA\_BAND5\_PRESENT  
QA\_BAND6\_PRESENT\_F1  
QA\_BAND6\_PRESENT\_F2  
QA\_BAND7\_PRESENT  
QA\_BAND8\_PRESENT  
QA\_DAY\_NIGHT\_FLAG  
QA\_ENTIRELY\_FILLED\_SCANS  
QA\_ETM\_TIMECODE\_ERRORS  
QA\_FILLED\_PCD\_MAJOR\_FRAMES  
QA\_FILLED\_PCD\_MINOR\_FRAMES  
QA\_FULL\_APERTURE\_CAL\_FLAG  
QA\_FULL\_OR\_PARTIAL\_SCENE  
QA\_HORIZONTAL\_DISPLAY\_SHIFT  
QA\_LL\_QUAD\_CCA  
QA\_LR\_QUAD\_CCA  
QA\_MISSING\_ATTITUDE\_POINTS  
QA\_MISSING\_EPHEMERIS\_POINTS  
QA\_PARTIALLY\_FILLED\_SCANS  
QA\_REJECTED\_ATTITUDE\_POINTS  
QA\_REJECTED\_EPHEMERIS\_POINTS  
QA\_SCENE\_CCA  
QA\_SCENE\_QUALITY  
QA\_TOTAL\_ATTITUDE\_POINTS  
QA\_TOTAL\_EPHEMERIS\_POINTS  
QA\_TOTAL\_PCD\_MINOR\_FRAMES  
QA\_UL\_QUAD\_CCA  
QA\_UR\_QUAD\_CCA  
SCI\_ABNORM  
SCI\_STATE  
SEAICEPERCENT  
SNOWCOVERPERCENT  
SP\_ENDING\_ROW

SP\_STARTING\_PATH  
SP\_STARTING\_ROW  
STATION\_ID  
SUN\_AZIMUTH\_ANGLE  
SUN\_ELEVATION\_ANGLE  
ShadowFoundPct  
Snow\_IceSurfaceProcessedPct  
StartDataDay  
SuccessCloudOptPropRtrPct\_VIS  
SuccessCloudPhaseRtrPct\_IR  
SuccessCloudTopPropRtrPct\_IR  
SuccessfulRetrievalPct  
SuccessfulRetrievalPct\_IR  
SuccessfulRetrievalPct\_Land  
SuccessfulRetrievalPct\_NIR  
SuccessfulRetrievalPct\_Ocean  
SunglintProcessedPct  
ThickCloudDetectedPct\_IR  
ThinCirrusIR\_FoundPct  
ThinCirrusSolarFoundPct  
UncertainConfidentClearPct  
VerCOCCO\_Tables  
VerCarder\_params  
VerClark\_params  
VerEmissivity  
VerHoge\_params  
VerIpar\_prms  
VerMET  
VerMOD02  
VerMOD03  
VerMOD35  
VerModis\_aer  
VerModis\_aerosol  
VerModis\_dob  
VerModis\_f0  
VerModis\_lcw  
VerModis\_rayleigh  
VerModis\_white  
VerModsst\_coeffs  
VerOZONE  
VerParm\_CZCS\_pigment  
VerParm\_Eps\_78  
VerParm\_K\_490

VerParm\_absorp\_coef\_gelb  
VerParm\_aer\_model1  
VerParm\_aer\_model2  
VerParm\_arp  
VerParm\_calcite\_conc  
VerParm\_chlor\_MODIS  
VerParm\_chlor\_a\_2  
VerParm\_chlor\_a\_3  
VerParm\_chlor\_absorb  
VerParm\_chlor\_fluor\_base  
VerParm\_chlor\_fluor\_effic  
VerParm\_chlor\_fluor\_ht  
VerParm\_cocco\_conc\_detach  
VerParm\_cocco\_pigmnt\_conc  
VerParm\_eps\_clr\_water  
VerParm\_ipar  
VerParm\_nLw\_412  
VerParm\_nLw\_443  
VerParm\_nLw\_488  
VerParm\_nLw\_531  
VerParm\_nLw\_551  
VerParm\_nLw\_667  
VerParm\_nLw\_678  
VerParm\_phycoeryth\_conc  
VerParm\_phycou\_conc  
VerParm\_pigment\_c1\_total  
VerParm\_sst  
VerParm\_sst4  
VerParm\_tot\_absorb\_1  
VerParm\_tot\_absorb\_2  
VerParm\_tot\_absorb\_3  
VerParm\_tot\_absorb\_4  
VerParm\_tot\_absorb\_5  
VerReynolds  
VerShallow  
VerSpectra  
VeryHighConfidentClearPct  
WRS\_SCENE\_NO  
WaterCloudDetectedPct\_IR  
WaterCloudDetectedPct\_VIS  
WaterProcessedPct

## **AdvertisementType**

### **Description**

Type of advertisement (product, provider, or service).

### **Reference List**

Name
AdvertisementMaster

## **AdvertisementUR**

### **Description**

Universal Reference to the server that can execute a service.

Content Source: IOS

### **Reference List**

Name
SignatureServiceAdvertisement

## **AggregationRelationship**

### **Description**

This attribute identifies the relationship between the aggregation attribute and its corresponding value. This relationship may be expressed as boolean operations i.e. '=, <, >, ne'

Content Source: DP

Constraints: If AggregationType and AggregationValue exist then AggregationRelationship must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
MultipleTypeCollection

## **Description**

'=' - Equal

GT - Greater Than

LT - Less Than

NE - Not Equal

GE - Greater Than or Equal

LE - Less Than or Equal

## **AggregationType**

### **Description**

This attribute will contain the criteria by which multiple type collections have been grouped. It will describe the major categorization which applies to the data therein. Possible collection groupings include: INSTRUMENT, for all collections associated with a given collecting instrument such as CERES--this is a common aggregation criteria for ECS 'datasets'; PROJECT, for all data associated with a given project that may or may not be related to a single instrument, such as FIRE--this is again a common aggregation criteria for ECS 'datasets'; PARAMETER, for all gran-ules that reflect measurements of a single specific (or related group of specific) geophysical parameters, such as CLOUD PROPERTIES--this is often an aggregation criteria for ECS 'products'; SUPERGRANULE, for collections of granules that a data provider wishes to be orderable as a single related grouping, such as SSM/I TIME SERIES-- this is a concept adopted from MSFC use; EVENT, for a predetermined/tagged set of granules that have been found to be related to a particular geophysical phenomena or event, such as MIDWEST FLOOD '93 or OZONE HOLE or MT. PINATUBO--this is a new ECS concept, also suggested by the University of Virginia Atmospheric researchers.

Content Source: DP

Constraints: If AggregationValue and AggregationRelationship exist then AggregationType must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
MultipleTypeCollection

## **Description**

Instrument

Project

Parameter

Supergranule

Event

Season

Region

## **AggregationValue**

### **Description**

Attribute Description: This attribute contains the value associated with the aggregation type. An example may be EVENT (aggregation type) = MIDWEST FLOOD '93 (aggregation value). MIDWEST FLOOD '93 would be the value associated with the event or aggregation type.

Content Source: DP

Constraints: If AggregationType and AggregationRelationship exist then AggregationValue must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
MultipleTypeCollection

### **Description**

Free Text

## **AlgorithmPackageAcceptanceDate**

### **Description**

This attribute specifies the date that this package version successfully passed AI&T procedures and was accepted as ECS standard algorithm.

Content Source:      AI&T

Constraints:

If Delivered Algorithm Package is utilized then AlgorithmPackageAcceptanceDate must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
AlgorithmPackage

## **AlgorithmPackageMaturityCode**

### **Description**

This specifies the maturity of the algorithm package as a whole. Maturity code plus version number tells version state.

Content Source:      DP

Constraints:

If Delivered Algorithm Package is utilized then AlgorithmPackageMaturityCode must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
AlgorithmPackage

## **Description**

pre-launch - preflight development code

PREL - Preliminary. EOS platform is flying development code at best; frequently changing, not stable.

OPL - Operational. Production code, will change, but not frequently; preliminary validation has been done.

stable - code stable and has been fully validated.

final - final version of code, mission is over.

## **AlgorithmPackageName**

### **Description**

This attribute is the name given to the complete delivered package submitted for algorithm integration and test.

Content Source: DP

Constraints:

If Delivered Algorithm Package is utilized then AlgorithmPackageName must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
AlgorithmPackage

## **AlgorithmPackageVersion**

### **Description**

This attribute specifies the version of the full package being delivered.

Content Source: DP

Constraints:

If Delivered Algorithm Package is utilized then AlgorithmPackageVersion must exist.

**Annotation**

Reference Document: 420-TP-015-001, February 1997

**Reference List**

Name
AlgorithmPackage

**AltitudeDatumName****Description**

The identification given to the level surface taken as the surface of reference from which altitudes are measured.

Content Source: DP

**Annotation**

Reference Document: 420-TP-015-001, February 1997

**Reference List**

Name
AltitudeSystemDefinition

**Description**

Free Text

**AltitudeDistanceUnits****Description**

Units in which altitudes are recorded.

Content Source: DP

**Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
AltitudeSystemDefinition

### **Description**

meters

feet

millibars - Used to measure pressure levels

theta value - Units used to measure geopotential height

hectoPascals

kilometers

## **AltitudeEncodingMethod**

### **Description**

The means used to encode the altitudes.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
AltitudeSystemDefinition

### **Description**

Explicit elevation coordinate included with horizontal coordinates

Implicit coordinate

Attribute Values

## **AltitudeResolution**

### **Description**

The minimum distance possible between two adjacent altitude values, expressed in Altitude Distance Units of measure.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
AltitudeSystemDefinition

## **AnalysisLongName**

### **Description**

The expanded or long name of the analysis source identified using AnalysisShortName. AnalysisLongName is intended to categorize collections by the processes, which collected (e.g. census survey) or produced them (e.g. NMC 16-level Nested Grid Model).

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
AnalysisSource

## **AnalysisShortName**

### **Description**

AnalysisShortName is the unique identifier of the collection or analysis process(s) which best characterize the ECSCollection or Granule. ECSCollections or Granules may be characterized by both a collection and an analysis data set which included data collected using the NWS ASOS network (PlatformType=Network, PlatformShort-Name= ASOS) which was processed using an NMC analysis model (e.g. AnalysisType=Model, AnalysisShortName= RAFS,

AnalysisDescription= Regional Area Forecast System, AnalysisTechnique= Regional Optimal Interpolation.)

Content Source: DP (Collection); PGE (Granule)

Constraints:

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
AnalysisSource

## **AnalysisSourceGuidePointer**

### **Description**

Logical pointer to the Analysis Source Guide.

Content Source: DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
AnalysisSourceGuide

## **AnalysisTechnique**

### **Description**

The technique or process used to produce the analysis source. (e.g. 16 layer nested grid model)

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
AnalysisSource

## **AnalysisType**

### **Description**

The defined type of analysis source.

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
AnalysisSource

### **Description**

Standard  
Model  
Report  
Map  
Survey  
Chart  
Publication

## **AncillaryInputPointer**

### **Description**

Data model logical reference to ancillary input data.

Content Source: DSS

Constraints: If ancillary data exists then AncillaryInputPointer exists.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
AncillaryInputGranule

## **AncillaryInputType**

### **Description**

This attribute specifies the type of ancillary input granule.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
AncillaryInputGranule

### **Description**

Algorithm  
Climatology  
Geolocation  
Instrument  
Meteorological

## **ArchiveCenter**

### **Description**

Center where collection is archived.

Content Source: DAAC

Constraints:

### **Annotation**

Reference: 420-TP-015-001, February 1997

## **Reference List**

Name
ECSCollection

### **Description**

GSFC - Goddard Space Flight Center

LaRC - Langley Research Center

ORNL - Oak Ridge National Laboratory

EDC - EROS Data Center

NSIDC - National Snow and Ice Data Center

JPL - Jet Propulsion Laboratory

CIESIN - Consortium for International Earth Science Information Network

## **ArchiveCenterGuidePointer**

### **Description**

Logical pointer to the Archive Center Guide.

Content Source: DAAC

## **Reference List**

Name
ArchiveCenterGuide

## **ATBDPointer**

### **Description**

Data model reference to the document specification.

Content Source: DSS

Constraints: If ATBD exists then ATBDPointer exists.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

**Reference List**

Name
ATBD

**AuthorAffiliation****Description**

The name of an agency or center with which the author of the document works for or is affiliated with.

**Annotation**

Reference Document: 420-TP-015-001, February 1997.

**Reference List**

Name
Author

**Description**

Free Text

**AuthorName****Description**

The name of the author of the document.

**Annotation**

Reference Document: 420-TP-015-001, February 1997.

**Reference List**

Name
Author

**Description**

Free Text

## **AutomaticQualityFlag**

### **Description**

The granule level flag applying generally to the granule and specifically to parameters the granule level. When applied to parameter, the flag refers to the quality of that parameter for the granule (as applicable). The parameters determining whether the flag is set are defined by the developer and documented in the Quality Flag Explanation.

Content Source: PGE; DP

Constraints: One flag from QAFlags must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
QAFlags

### **Description**

Passed - The granule (forparameter) has passed a specified automatic test.

Failed - The granule (forparameter) has failed a specified automatic test.

Suspect - May be okay; could not clearly define.

## **AutomaticQualityFlagExplanation**

### **Description**

A text explanation of the criteria used to set automatic quality flag; including thresholds or other criteria.

Content Source:

### **Reference List**

Name
QAFlags

### **Description**

Free Text

## **BearingReferenceDirection**

### **Description**

Direction from which the bearing is measured clockwise.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
DistanceandBearingRepresentation

### **Description**

North

South

## **BearingReferenceMeridian**

### **Description**

Axis from which the bearing is measured.

Content Source: DP

Constraints: BearingReferenceMeridian is mandatory if distanceandBearingRepresentation class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
DistanceandBearingRepresentation

## **Description**

Assumed

Grid

Magnetic

Astronomic

Geodetic

## **BearingResolution**

### **Description**

The minimum angle measurable between two points, expressed in Bearing Units of measure.

Content Source: DP

Constraints: BearingResolution > 0.0

Constraints: BearingResolution is mandatory if DistanceandBearingRepresentation class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
DistanceandBearingRepresentation

## **BearingUnits**

### **Description**

Units of measure used for angles.

Content Source: DP

Constraints: BearingUnits is mandatory if DistanceandBearingRepresentation class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
DistanceandBearingRepresentation

### **Description**

Decimal degrees

Decimal minutes

Decimal seconds

Degrees and decimal minutes

Degrees, minutes, and decimal seconds

Radians

Grads

## **BrowseDescription**

### **Description**

Textual description of the Browse granule.

Content Source: DP

Constraints: Must exist if browse produced.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
Browse

## **BrowsePointer**

### **Description**

Data model specific logical reference to the browse.

Content Source: DSS

Constraints: If browse product exists then BrowsePointer exists.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
Browse

## **BrowseProductionDateTime**

### **Description**

The date and time a Browse was produced.

### **Reference List**

Name
Browse

## **BrowseSize**

### **Description**

Size of Browse Product in MB.

Content Source: DSS

Constraints: assumed that BrowseSize < 1.0 MB

Constraints: BrowseSize > 0.0 MB

## **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
Browse

## **Description**

Free Numerics

## **CalendarDate**

### **Description**

The year (and optionally month, or month and day). This attribute is used to specify a single date covered by a data collection, granule, or event.

Content Source: DP(collection);PGE(granule)

Constraints:

CalendarDate is mandatory if SingleDateTime class is used.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
SingleDateTime

## **CampaignEndDate**

### **Description**

The ending date of the campaign.

Content Source: DP (Collection)

Constraints: Must be after campaign start date.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
Campaign

## **CampaignGuidePointer**

### **Description**

Logical pointer to the Campaign Guide.

Content Source: DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
CampaignGuide

## **CampaignLongName**

### **Description**

The expanded name of the campaign/experiment (e.g. Global Climate Observing System).

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
Campaign

### **Description**

Active Cavity Radiometer Irradiance Monitor

## **CampaignShortName**

### **Description**

The unique identifier by which a campaign/project/experiment is known. The campaign/project is the scientific endeavor associated with the acquisition of the collection. Collections may be associated with multiple campaigns.

Content Source: DP (Collection); PGE (Granule)

Constraints:

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Campaign

### **Description**

ACRIM

## **CampaignStartDate**

### **Description**

The starting date of a campaign/project/experiment.

Content Source: DP (Collection)

Constraints: Must be before campaign end date.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Campaign

## **CenterLatitude**

### **Description**

Geodetic latitude of center of locality.

Content Source: DP(collection);PGE(granule)

Constraints: West,East,North,South Bounding Coordinate not allowed with center lat/lon

Constraints: CenterLatitude => -90.0

Constraints: CenterLatitude <= +90.0

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Circle

## **CenterLongitude**

### **Description**

Longitude of approximate center of locality.

Content Source: DP(collection);PGE(granule)

Constraints: Not to be used with West,East,North,South Bounding Coordinates. Constraints:

CenterLongitude <= +180.0

Constraints: CenterLongitude => -180.0

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Circle

## **CitationforExternalPublication**

### **Description**

The recommended reference to be used when referring to this collection in publications. Its format is free text, but should include: Originator (the name of an organization or individual that developed the data set, where Editor(s)' names are followed by (ed.) and Compiler(s)' names are followed by (comp.)); Publication date (the date of publication or release of the data set); Title (the name by which document can be referenced).

Content Source: DP

Alias: Edition

Originator  
or Publication Date

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
SingleTypeCollection

### **Description**

Free Text

## **City**

### **Description**

The city of the person or organization.

Content Source: DP

Constraints:

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
ContactAddress

## **CollectionDescription**

### **Description**

This attribute identifies the major emphasis of the content of the collection. Some examples are: 'cloud top products generated from instrument X', or 'all products containing the parameter sea surface temperature as skin temp'.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
CollectionDescriptionClass

### **Description**

Free Text

## **CollectionState**

### **Description**

This attribute describes the state of the collection, whether it is planned but not yet existent, partially complete due to continual additions from remotely sensed data/processing/reprocessing, or is considered a complete product/dataset.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
SingleTypeCollection

## **Description**

Completed - All currently planned collection, processing, and reprocessing are complete for this product/ dataset/ collection.

In Work - Data is currently either being collected, processed, or reprocessed for this product/ dataset/ collection.

Planned - Data has not yet been collected or processed for this product/ dataset/ collection, possible candidate for consideration in the collection.

Unknown

None

## **CollectionType**

### **Description**

Type of associated collection being described. Used to describe the 'geneology' of the collection in terms of other collections and supports production history.

Content Source: DP

Constraints: Must exist when Collection Use is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
CollectionAssociation

### **Description**

Input - Collection used as input or ancillary to this collection.

Dependent - Collections which use this collection as input, including browse.

Science Associated - Collections with which this collection is associated in science terms.

Elevation- Required for GLAS

Range Corrections

Altimetry Data

GLAS Instrument Data

Sea Ice Data

Ocean Data

## **CollectionUse**

### **Description**

Additional comments for all types of associated collections, such as the importance of the input and its use.

Content Source: DP

Constraints: Must exist when Collection Type is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
CollectionAssociation

### **Description**

Free Text

## **ComponentName**

### **Description**

Name of the Component.

### **Reference List**

Name
SSAPComponent

## **ComponentType**

### **Description**

Name of the Component Type.

## **Reference List**

Name
SSAPComponent

## **ContactFirstName**

### **Description**

First name of the individual which the contact role (producer, archiver, distributor, or data originator) applies. People are points of contact, rather than organizations, in cases where the association of the person to the data set is more significant than the association of the organization to the data set. They may also be included if both a single person and organization are provided as points of contact.

Content Source: DP

Alias: Contact Person Primary

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
ContactPerson

## **ContactInstructions**

### **Description**

Supplemental instructions on how or when to contact the individual or organization.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
Contact

## **Description**

Free Text

## **ContactJobPosition**

### **Description**

The title of the individual, i.e. Team Leader, Principal Investigator.

Content Source: DP; DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
ContactPerson

## **Description**

Free Text

## **ContactLastName**

### **Description**

Last name of the individual which the contact role (producer, archiver, distributor, or data originator) applies. People are points of contact, rather than organizations, in cases where the association of the person to the data set is more significant than the association of the organization to the data set. They may also be included if both a single person and organization are provided as points of contact.

Content Source: DP  
Alias: Contact Person Primary  
Contact Person  
Constraints:  
Mandatory if applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
ContactPerson

## **ContactMiddleName**

### **Description**

Middle name of the individual which the contact role (producer, archiver, distributor, or data originator) applies. People are points of contact, rather than organizations, in cases where the association of the person to the data set is more significant than the association of the organization to the data set. They may also be included if both a single person and organization are provided as points of contact.

Content Source: DP  
Alias: Contact Person Primary  
Contact Person  
Constraints:  
Mandatory if applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
ContactPerson

## **ContactOrganizationName**

### **Description**

The organization and the member of the organization, associated with the data set. Used in cases where the association of the organization to the data set is more significant than the association of the person to the data set.

Content Source: DP

Alias: Contact Organization

Contact Organization Primary

Constraints:

Mandatory if applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
ContactOrganization

## **Country**

### **Description**

The country of the address.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

Standard: ISO 3166 Maintenance Agency (<ftp://ftp.ripe.net/iso3166-countrycodes>) 3-letter code

### **Reference List**

Name
ContactAddress

## **Description**

AFG - Afghanistan  
ALB - Albania  
DZA - Algeria  
ASM - American Samoa  
AND - Andorra  
AGO - Angola  
AIA - Anguilla  
ATA - Antarctica  
ATG - An Tigua And Barbuda  
ARG - Argentina  
ARM - Armenia  
ABW - Aruba  
AUS - Australia  
AUT - Austria  
AZE - Azerbaijan  
BHS - Bahamas  
BHR - Bahrain  
BGD - Bangladesh  
BRB - Barbados  
BLR - Belarus  
BEL - Belgium  
BLZ - Belize  
BEN - Benin  
BMU - Bermuda  
BTN - Bhutan  
BOL - Bolivia  
BIH - Bosnia And Herzegovina  
BWA - Botswana  
BVT - Bouvet Island  
BRA - Brazil  
IOT - British Indian Ocean Territory  
BRN - Brunei Darussalam  
BGR - Bulgaria  
BFA - Burkina Faso  
BDI - Burundi  
KHM - Cambodia  
CMR - Cameroon  
CAN - Canada  
CPV - Cape Verde  
CYM - Cayman Islands  
CAF - Central African Republic

TCD - Chad  
CHL - Chile  
CHN - China  
CXR - Christmas Island  
CCK - Cocos (Keeling) Islands  
COL - Colombia  
COM - Comoros  
COG - Congo  
COK - Cook Islands  
CRI - Costa Rica  
CIV - Cote D'ivoire  
HRV - Croatia (Local Name: Hrvatska)  
CUB - Cuba  
CYP - Cyprus  
CZE - Czech Republic  
DNK - Denmark  
DJI - Djibouti  
DMA - Dominica  
DOM - Dominican Republic  
TMP - East Timor  
ECU - Ecuador  
EGY - Egypt  
SLV - El Salvador  
GNQ - Equatorial Guinea  
ERI - Eritrea  
EST - Estonia  
ETH - Ethiopia  
FLK - Falkland Islands (Malvinas)  
FRO - Faroe Islands  
FJI - Fiji  
FIN - Finland  
FRA - France  
FXX - France, Metropolitan  
GUF - French Guiana  
PYF - French Polynesia  
ATF - French Southern Territories  
GAB - Gabon  
GMB - Gambia  
GEO - Georgia  
DEU - Germany  
GHA - Ghana  
GIB - Gibraltar  
GRC - Greece

GRL - Greenland  
GRD - Grenada  
GLP - Guadeloupe  
GUM - Guam  
GTM - Guatemala  
GIN - Guinea  
GNB - Guinea-Bissau  
GUY - Guyana  
HTI - Haiti  
HMD - Heard And Mc Donald Islands  
VAT - Holy See (Vatican City State)  
HND - Honduras  
HKG - Hong Kong  
HUN - Hungary  
ISL - Iceland  
IND - India  
IDN - Indonesia  
IRN - Iran (Islamic Republic Of)  
IRQ - Iraq  
IRL - Ireland  
ISR - Israel  
ITA - Italy  
JAM - Jamaica  
JPN - Japan  
JOR - Jordan  
KAZ - Kazakhstan  
KEN - Kenya  
KIR - Kiribati  
PRK - Korea, Democratic People's Republic Of  
KOR - Korea, Republic Of  
KWT - Kuwait  
KGZ - Kyrgyzstan  
LAO - Lao People's Democratic Republic  
LVA - Latvia  
LBN - Lebanon  
LSO - Lesotho  
LBR - Liberia  
LBY - Libyan Arab Jamahiriya  
LIE - Liechtenstein  
LTU - Lithuania  
LUX - Luxembourg  
MAC - Macau  
MKD - Macedonia, The Former Yugoslav Republic Of

MDG - Madagascar  
MWI - Malawi  
MYS - Malaysia  
MDV - Maldives  
MLI - Mali  
MLT - Malta  
MHL - Marshall Islands  
MTQ - Martinique  
MRT - Mauritania  
MUS - Mauritius  
MYT - Mayotte  
MEX - Mexico  
FSM - Micronesia, Federated States Of  
MDA - Moldova, Republic Of  
MCO - Monaco  
MNG - Mongolia  
MSR - Montserrat  
MAR - Morocco  
MOZ - Mozambique  
MMR - Myanmar  
NAM - Namibia  
NRU - Nauru  
NPL - Nepal  
NLD - Netherlands  
ANT - Netherlands Antilles  
NCL - New Caledonia  
NZL - New Zealand  
NIC - Nicaragua  
NER - Niger  
NGA - Nigeria  
NIU - Niue  
NFK - Norfolk Island  
MNP - Northern Mariana Islands  
NOR - Norway  
OMN - Oman  
PAK - Pakistan  
PLW - Palau  
PAN - Panama  
PNG - Papua New Guinea  
PRY - Paraguay  
PER - Peru  
PHL - Philippines  
PCN - Pitcairn

POL - Poland  
PRT - Portugal  
PRI - Puerto Rico  
QAT - Qatar  
REU - Reunion  
ROM - Romania  
RUS - Russian Federation  
RWA - Rwanda  
KNA - Saint Kitts And Nevis  
LCA - Saint Lucia  
VCT - Saint Vincent And The Grenadines  
WSM - Samoa  
SMR - San Marino  
STP - Sao Tome And Principe  
SAU - Saudi Arabia  
SEN - Senegal  
SYC - Seychelles  
SLE - Sierra Leone  
SGP - Singapore  
SVK - Slovakia (Slovak Republic)  
 SVN - Slovenia  
SLB - Solomon Islands  
SOM - Somalia  
ZAF - South Africa  
SGS - South Georgia And The South Sandwich Islands  
ESP - Spain  
LKA - Sri Lanka  
SHN - St. Helena  
SPM - St. Pierre And Miquelon  
SDN - Sudan  
SUR - Suriname  
SJM - Svalbard And Jan Mayen Islands  
SWZ - Swaziland  
SWE - Sweden  
CHE - Switzerland  
SYR - Syrian Arab Republic  
TWN - Taiwan, Province Of China  
TJK - Tajikistan  
TZA - Tanzania, United Republic Of  
THA - Thailand  
TGO - Togo  
TKL - Tokelau  
TON - Tonga

TTO - Trinidad And Tobago  
TUN - Tunisia  
TUR - Turkey  
TKM - Turkmenistan  
TCA - Turks And Caicos Islands  
TUV - Tuvalu  
UGA - Uganda  
UKR - Ukraine  
ARE - United Arab Emirates  
GBR - United Kingdom  
USA - United States  
UMI - United States Minor Outlying Islands  
URY - Uruguay  
UZB - Uzbekistan  
VUT - Vanuatu  
VEN - Venezuela  
VNM - Viet Nam  
VGB - Virgin Islands (British)  
VIR - Virgin Islands (U.S.)  
WLF - Wallis And Futuna Islands  
ESH - Western Sahara  
YEM - Yemen  
YUG - Yugoslavia  
ZAR - Zaire  
ZMB - Zambia  
ZWE – Zimbabwe

## CSDTComments

### Description

A free text field for the user to add comments clarifying the data structure.

Content Source:

### Annotation

Reference Document: 420-TP-015-001, February 1997

### Reference List

Name
CSDTDescription

## **DAACName**

### **Description**

The name of the Distributed Active Archive Center that is responsible for the production plan.

Content Source: DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ProductionPlan

### **Description**

GSFC - Goddard Space Flight Center

LaRC - Langley Research Center

ORNL - Oak Ridge National Laboratory

EDC - EROS Data Center

NSIDC - National Snow and Ice Data Center

JPL - Jet Propulsion Laboratory

CIESIN - Consortium for International Earth Science Information Network

SAR - Alaska SAR Facility

## **DataCenter**

### **Description**

The data center is supporting the information for which the guide is applicable.

Content Source: DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
Guide

## **DateofReferencePaperPublication**

### **Description**

Contains the date of formal/informal publication of the reference paper.

Content Source: DP

Constraints: if reference papers utilized, this must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ReferencePaper

## **DateType**

### **Description**

This attribute specifies the type of date represented by the value in the date attributes of the temporal subclasses.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
Temporal

## **Description**

Julian - (JD)- the internal of time in days and fraction of day since 4713 B.C. January 1, Greenwich noon, Julian proleptic calendar.

Gregorian - Standard calendar dates using B.C., A.D. year, and January 1 through December 31 month and day delineation.

J2000

## **DayNightFlag**

### **Description**

This attribute is used to identify if a granule was collected during the day, night (between sunset and sunrise) or both.

Content Source: PGE

Alias: NA

Constraints: TBD

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ECSDataGranule

## **Description**

Day - between sunrise and sunset

Night - between sunset and sunrise

Both - Includes both 'Day' and 'Night'

NA

D - Day (between sunrise and sunset)

N - Night (between sunset and sunrise)

## **DeliveryPurpose**

### **Description**

This attribute describes the purpose of the delivery e.g., an initial release, modification, etc.

Content Source: DP

Constraints:

If Delivered Algorithm Package is utilized then DeliveryPurpose must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
AlgorithmPackage

### **Description**

Initial Delivery

Early Delivery

ENRG MOD - Engineering Modification

Operational

Enhancement

SW Patch

## **DenominatorofFlatteningRatio**

### **Description**

The ratios of the Earth's major axis to the difference between the major and the minor.

Content Source: DP

Constraints: DenominatorofFlatteningRatio > 0.0

Constraints: DenominatorofFlatteningRatio is mandatory if GeodeticModel class is applicable.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
GeodeticModel

## **DepthDatumName**

### **Description**

The identification given to surface of reference from which depths are measured.

Content Source: DP

Constraints: DepthDatumName is mandatory if DepthSystemDefinition class is applicable.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
DepthSystemDefinition

### **Description**

Approximate lowest astronomical tide

Chart datum; datum for sounding reduction

Columbia River datum

Equatorial springs low water

Gulf Coast low water datum

High-water full and charge

High water

Higher high water

Highest astronomical tide

Indian spring low water

Land survey datum

Local Surface

Low-water full and charge

Low water

Low water datum

Lower low water

Lowest astronomical tide

Lowest low water  
Lowest normal low water  
Mean high water (MHW)  
Mean high water neap  
Mean high water springs  
Mean higher high water  
Mean higher low water  
Mean low water (MLW)  
Mean low water neap  
Mean low water springs  
Mean lower high water  
Mean lower low water  
Mean lower low water springs  
Mean sea level (MSL)  
Mean tide level  
Neap tide  
No correction  
Spring tide  
Tropic lower low water

## **DepthDistanceUnits**

### **Description**

Units in which depths are recorded.

Content Source: DP

Constraints: DepthDistanceUnits are mandatory if DepthSystemDefinition class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
DepthSystemDefinition

### **Description**

fathoms  
feet  
meters

## **DepthEncodingMethod**

### **Description**

The means used to encode depths.

Content Source: DP

Constraints: DepthEncodingMethod is mandatory if DepthSystemDefinition class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
DepthSystemDefinition

### **Description**

Attribute Values

Explicit depth coordinate included with horizontal coordinates

Implicit coordinate

## **DepthResolution**

### **Description**

The minimum distance possible between two adjacent depth values, expressed in depth distance units of measure.

Content Source: DP

Constraints: DepthResolution > 0.0

Constraints: DepthResolution is mandatory if DepthSystemDefinition class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
DepthSystemDefinition

## **Description**

### **Description**

Description of the Advertisement.

### **Reference List**

Name
AdvertisementDescription

## **DescriptionType**

### **Description**

Contains the type of algorithm description.

Content Source: DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
AlgorithmDescription

### **Description**

System Description

Processing File Description

ATBD

Test Plan

Operations Manual

SW Development Standard

Programmers Guide

Detailed Design

Performance Test Results

## **DetailedDesignPointer**

### **Description**

Data model logical reference to detailed design document.

Content Source: DSS

Constraints: If Detailed Design Document exist then DetailedDesignPointer must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
DetailedDesign

## **DistanceResolution**

### **Description**

The minimum distance measurable between two points, expressed in Planar Distance Units of measure.

Content Source: DP

Constraints: DistanceResolution > 0.0

Constraints: DistanceResolution is mandatory if DistanceandBearingRepresentation class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
DistanceandBearingRepresentation

## **DocumentCreated**

### **Description**

The date on which the document was created.

Content Source: DP

Constraints: mandatory for all documents

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Document

## **DocumentUpdated**

### **Description**

The date on which the document was last revised or updated.

Content Source: DP

Constraints: mandatory for all documents

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Document

## **DocumentVersion**

### **Description**

The version or revision level of the document.

Content Source: DP

Constraints: mandatory for all documents

## **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
Document

## **EastBoundingCoordinate**

### **Description**

Eastern-most limit of coverage expressed in longitude.

Content Source: DP(collection);PGE(granule)

Constraints: EastBoundingCoordinate not null for collection only.

Constraints: EastBoundingCoordinate => -180.0

Constraints: EastBoundingCoordinate <= +180.0

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
BoundingRectangle

## **ECSCollectionGuidePointer**

### **Description**

Logical pointer to a specification for the ECS Collection Guide.

Content Source: DAAC

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ECSCollectionGuide

## **ECSDisciplineKeyword**

### **Description**

Keyword used to describe the general discipline area of the collection. A collection can conceivably cover several disciplines.

Content Source: DP

Constraints:

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ECSDiscipline

### **Description**

Earth Science

## **ECSPparameterKeyword**

### **Description**

Keyword used to describe specific characteristics of a collection at a higher level of detail than provided by ECSVariableKeyword.

Content Source: DP

Alias: NA

Constraints: Controlled keyword

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ECSPparameter

## **Description**

Absorbed radiation by phytoplankton (ARP)  
Aerosol model  
Aerosol optical thickness at 865 nm (Tau 865)  
Aerosol radiance at 765 nm  
Aerosol radiance ratio (Clear water epsilon 531nm/667nm)  
Aerosol radiance ratio (Epsilon 765nm/865nm)  
Albedo  
Bidirectional Reflectance  
Calcite  
Calcium Carbonate  
Canopy Density  
Carbon Export  
Chlorophyll absorption coefficient at 675 nm  
Chlorophyll pigment corrected for the presence of coccoliths  
Chlorophyll fluorescence baseline  
Chlorophyll fluorescence efficiency  
Chlorophyll fluorescence line height  
Cloud Presence  
Cloud Shadow  
Contour Line  
CZCS total pigment concentration  
Daytime Brightness Temperature from Mid-IR Bands  
Daytime Brightness Temperature from Thermal Bands  
Daytime Infrared Radiance from Mid-IR Bands  
Daytime Infrared Radiance from Thermal Bands  
Daytime SST from MODIS bands 22 and 23 (Mid IR)  
Daytime SST from MODIS bands 31 and 32 (Thermal IR)  
DEM  
Detached coccolith concentration  
Diffuse attenuation coefficient at 490 nm (K490)  
Digital Contours  
Digital Mapping  
Digital Terrain Elevation Data  
Digital Terrain Model  
Dissolved Organic Matter  
Dissolved organic matter absorption at 400 nm (gelbstoff)  
Elevation Data  
Elevation Distribution  
Fire Characteristics  
Fire Intensity  
Fire Temperature  
Gelbstoff  
Glint radiance

Infrared  
Instantaneous photosynthetically available radiation (IPAR)  
Land Cover Change  
Mixed Layer Depth  
MODIS chlorophyll-a pigment concentration  
MODIS chlorophyll-a pigment concentration (3 band)  
MODIS total pigment concentration  
New Nitrogen Production  
Nighttime Brightness Temperature from Mid-IR Bands  
Nighttime Brightness Temperature from Thermal Bands  
Nighttime Infrared Radiance from Mid-IR Bands  
Nighttime Infrared Radiance from Thermal Bands  
Nighttime SST from MODIS bands 22 and 23 (Mid IR)  
Nighttime SST from MODIS bands 31 and 32 (Thermal IR)  
Nitrogen Trioxide  
Normalized water-leaving radiance at 412 nm  
Normalized water-leaving radiance at 443 nm  
Normalized water-leaving radiance at 488 nm  
Normalized water-leaving radiance at 531 nm  
Normalized water-leaving radiance at 551 nm  
Normalized water-leaving radiance at 667 nm  
Normalized water-leaving radiance at 678 nm  
Optical Depth  
Photosynthetically Available Radiation (PAR)  
Phycoerythrobilin  
Phycoerythrobilin-rich phycoerythrin concentration (PEB)  
Phycourobilin  
Phycourobilin-rich phycoerythrin concentration (PUB)  
Primary Production  
Rayleigh radiance  
Satellite azimuth  
Satellite zenith  
SeaWiFS chlorophyll-a pigment concentration  
SeaWiFS chlorophyll-a pigment concentration (2 band)  
Shadow Mask  
Solar azimuth  
Solar zenith  
Surface Albedo  
Surface Elevation  
Surface Emissivity  
Surface Reflectance  
Texture Indicies  
Total absorption coefficient at 412 nm  
Total absorption coefficient at 443 nm

Total absorption coefficient at 488 nm  
Total absorption coefficient at 531 nm  
Total absorption coefficient at 551 nm  
U wind component  
V wind component  
Vegetation Cover Change  
Visible  
Whitecap radiance  
Wind Speed

## **ECSTermKeyword**

### **Description**

Keyword used to describe the science parameter area of the collection. A collection can conceivably cover many such parameters.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ECSTerm

### **Description**

Aerosols  
Air Quality  
Altitude  
Aquatic Habitat  
Atmospheric Chemistry  
Atmospheric Phenomena  
Atmospheric Pressure  
Atmospheric Temperature  
Atmospheric Water Vapor  
Atmospheric Winds  
Attitudes, Preferences, Behavior  
Bathymetry  
Boundaries  
Clouds  
Coastal Processes  
Ecological Dynamics

Economic Resources  
Engineering/Sensor Quantities  
Environmental Effects  
Erosion/Sedimentation  
Food Resources  
Fungi  
Gamma Ray  
Geochemistry  
Geodetics/Gravity  
Geologic Time  
Geomagnetism  
Geophysical Fields  
Geothermal  
Ground Water  
Human Health  
Ice Core Records  
Infrared Wavelengths  
Infrastructure  
Land Records  
Land Slope  
Land Temperature  
Land Use/Land Cover  
Landscape  
Marine Geophysics  
Marine Sediments  
Microbiota  
Microwave  
Natural Resources  
Ocean Acoustics  
Ocean Chemistry  
Ocean Circulation  
Ocean Heat Budget  
Ocean Optics  
Ocean Pressure  
Ocean Temperature  
Ocean Water Budget  
Ocean Waves  
Ocean Winds  
Ocean/Lake Records  
Platform Characteristics  
Population  
Precipitation  
Radar  
Radiation Budget

Radio Wave  
Rocks/Minerals  
Salinity/Density  
Sea Ice  
Sea Surface  
Sea Surface Height  
Seismology  
Sensor Characteristics  
Snow/Ice  
Soils  
Solar Activity  
Solar Energetic Particles  
Surface Radiative Properties  
Surface Water  
Tectonics  
Temperature  
Terrestrial Habitat  
Tides  
Topography  
Transmission  
Ultraviolet Wavelengths  
Vegetation  
Viewing Geometry  
Visible Wavelengths  
Volcanoes  
Water Quality  
Wetlands  
X-Ray  
Zoology

## **ECSTopicKeyword**

### **Description**

Keyword used to describe the general topic area of the collection. A collection can conceivably cover several topics.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ECSTopic

## **Description**

Atmosphere  
Biosphere  
Cryosphere  
Human Dimensions  
Hydrosphere  
Land Surface  
Oceans  
Paleoclimate  
Radiance or Imagery  
Solar Physics  
Solid Earth

## **ECSVariableKeyword**

### **Description**

Keyword used to describe the specific science parameter content of the collection. A collection can conceivably cover many specific parameters. The keyword valids are the lowest level physical parameter terms which are normally searched by a user; i.e. a user enters a keyword which when found may connect with one or more parameters from collections. The keywords are also the lowest level words, which describe product content without being the server specific measurement (held in Parameter class). While there is a controlled list of these parameters held by GCMD, additions can be made by an as yet unspecified configuration control process.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ECSVariable

## **Description**

Ablation  
Absorption  
Abyssal Hills/Plains  
Acid Deposition  
Acid Rain  
Acoustic Attenuation  
Acoustic Frequency  
Acoustic Reflectivity  
Acoustic Scattering  
Acoustic Tomography  
Acoustic Velocity  
Adaptation  
Administrative Divisions  
Advection  
Aerosol Backscatter  
Aerosol Extinction  
Aerosol Particle Properties  
Aerosol Radiance  
Age Determinations  
Agricultural Land  
Agriculture  
Air Temperature  
Albedo  
Algae  
Alkalinity  
Alpha Particles  
Alpine/Tundra  
Ambient Noise  
Ammonia  
Amoebae  
Amphibians  
Anatomical Parameters  
Anemones  
Anisotropy  
Antenna Temperature  
Anticyclones/Cyclones  
Aphotic Zone  
Aquaculture  
Aquifer Recharge  
Aquifers  
Arachnids  
Arthropods

Atmospheric Emitted Radiation  
Atmospheric Heating  
Atmospheric Pressure  
Atmospheric Stability  
Attitude Characteristics  
Attenuated Backscatter  
Avalanche  
Bacteria  
Baroclinic Mode  
Barometric Altitude  
Barotropic Mode  
Barrier Islands  
Beaches  
Bedrock Lithology  
Benthic Habitat  
Benthic Heat Flow  
Benthic Index  
Bioaccumulation  
Bioavailability  
Biogeochemical Cycles  
Bioluminescence  
Biomass  
Biomass Burning  
Biomedical Chemicals  
Bioturbation  
Birds  
Blue-Green Algae  
Boundary Layer Temperature  
Bowen Ratio  
Brightness Temperature  
Brine Production  
Buildings  
Buoy Position  
Cambrian  
Canopy Characteristics  
Carbon  
Carbon Dioxide  
Carbon Monoxide  
Carbonaceous Aerosols  
Carbonate  
Carbonate Sediments  
Carboniferous  
Carcinogens  
Cave Deposits

Caves  
Cenozoic  
Centipedes  
Chemical Weathering  
Chemosynthesis  
Chlorine Dioxide  
Chlorine Monoxide  
Chlorofluorocarbons  
Chlorophyll  
Ciliates  
Cloud Amount  
Cloud Ceiling  
Cloud Cleared Radiance  
Cloud Condensation Nuclei  
Cloud Emissivity  
Cloud Forcing  
Cloud Height  
Cloud Ice  
Cloud Liquid Water  
Cloud Optical Thickness  
Cloud Precipitable Water  
Cloud Top Pressure  
Cloud Top Temperature  
Cloud Types  
Cloud Vertical Distribution  
Coal  
Coastal Elevation  
Coastal Habitat  
Coccolithophore  
Communications  
Community Structure  
Competition  
Condensation  
Conduction  
Conductivity  
Conifers  
Consumer Behavior  
Consumption  
Contaminants  
Continental Drift  
Continental Rises/Slopes  
Continental Shelves  
Continental Tectonics  
Contours

Control Surveys  
Convection  
Convergence/Divergence  
Coral Deposits  
Coral Reefs  
Corals  
Core Processes  
Corona Holes  
Coronal Properties  
Cosmic Rays  
Cretaceous  
Crops  
Crown  
Crustaceans  
Crustal Motion  
Crystals  
Cultural Features  
Cyclones  
Deciduous Vegetation  
Decomposition  
Deforestation  
Degradation  
Degree Days  
Deiced Temperature  
Deltas  
Dendrification Rate  
Density  
Depth Hoar  
Desalinization  
Desert  
Desertification  
Devonian  
Dew Point  
Diagenesis  
Diatoms  
Differential Flux  
Differential Pressure  
Diffusion  
Dimethyl Sulfide  
Discharge/Flow  
Diseases  
Dispersion  
Dissolved Gases  
Dissolved Solids

Diurnal Movements  
Divergence  
Dome Temperature  
Domesticated Animals  
Domesticated Plants  
Dominance  
Dominant Species  
Doppler Speed  
Downwelling  
Drainage  
Droplet Concentration/Size  
Droplet Size  
Drought  
Dunes  
Dust/Ash  
Earthquake Dynamics  
Earthquake Occurrences  
Earthquake Predictions  
Echinoderms  
Eddies  
Electric Field  
Electricity  
Electron Flux  
Emissions  
Emissivity  
Endangered Species  
Energetic Particles  
Energy Deposition  
Entrainment  
Eocene  
Erosion  
Eruption Dynamics  
Estuaries  
Estuarine Habitat  
Estuarine Wetlands  
Eutrophication  
Evaporation  
Evaporites  
Evapotranspiration  
Excretion  
Exotic Species  
Exotic Vegetation  
Extinction  
Extinction Coefficients

Faults  
Feeding Habitat  
Ferns  
Fetch  
Filaments  
Fire Characteristics  
Fire Occurrence  
Fish  
Fixation  
Fjords  
Flagellates  
Flatworms  
Floods  
Fluorescence  
Fog  
Folds  
Food-web Dynamics  
Food Production  
Foraminifers  
Forest Composition/ Structure  
Forest Habitat  
Fossil Fuel Burning  
Fracture Zones  
Freeze  
Freeze/Thaw  
Freezing Rain  
Fresh Water Flux  
Fronts  
Frost  
Gamma Ray  
Gas Flaring  
Gelbstoff  
Geomagnetic Forecasts  
Geomagnetic Indices  
Geomagnetic Induction  
Geopotential Height  
Geothermal Energy  
Geothermal Temperature  
Glaciation  
Glaciers  
Grassland  
Gravity  
Gravity Field  
Gravity Wave

Ground Height  
Groundwater Chemistry  
Groundwater Quality  
Guyots  
Gyres  
Hail  
Halocarbons  
Halocline  
Heat Flux  
Heating Rate  
Heavy Ions  
Heavy Metals  
Herbivory  
Holocene  
Humidity  
Hurricanes  
Hydration  
Hydraulic Conductivity  
Hydrocarbons  
Hydrochlorofluorocarbons  
Hydrofluorocarbons  
Hydrogenous Sediments  
Hydropattern  
Hydroperiod  
Hydrostatic Pressure  
Hydrothermal Vents  
Hydroxyl  
Ice Age  
Ice Compactness  
Ice Concentration  
Ice Core Air Bubbles  
Ice Deformation  
Ice Depth/Thickness  
Ice Drift  
Ice Edges  
Ice Extent  
Ice Floes  
Ice Growth/Melt  
Ice Motion  
Ice Pack  
Ice Roughness  
Ice Sheet Elevation  
Ice Sheet Reflectance  
Ice Sheets

Ice Sheet Slope  
Ice Temperature  
Ice Types  
Ice Velocity  
Icebergs  
Igneous Rocks  
Importance Value  
Incoming Shortwave Radiation  
Indigenous Species  
Indigenous Vegetation  
Industrial Emissions  
Industrialization  
Infiltration  
Infrared Flux  
Infrared Imagery  
Infrared Radiance  
Infrared Radiation  
Inlets  
Inorganic Carbon  
Inorganic Matter  
Insects  
Instability  
Internal Waves  
Intertidal Zone  
Inundation  
Inversion Height  
Invertebrates  
Ion Exchange  
Ions  
Irradiance  
Irrigation  
Island Arcs  
Islands  
Isostatic Rebound  
Isotopes  
Jellyfish  
Jurassic  
Kinetic Energy  
Lacustrine Wetlands  
Lagoons  
Lake Ice  
Lake Levels  
Lakes  
Land Classes

Land Cover  
Land Heat Capacity  
Land Management  
Land Productivity  
Land Resources  
Land Slope  
Land Subsidence  
Land Surface Temperature  
Land Tenure  
Landforms  
Landscape Ecology  
Landscape Management  
Landscape Pattern  
Landslides  
Lava  
Lead  
Leads  
Leaf Characteristics  
Lichens  
Life History  
Light Attenuation  
Light Transmission  
Lightning  
Liquid Water Equivalent  
Litter Characteristics  
Local Subsidence Trends  
Loess  
Longshore Currents  
Longwave Radiation  
Macroalgae  
Macrofossils  
Macrophyte  
Magma  
Magnetic Anomalies  
Magnetic Declination  
Magnetic Field  
Magnetic Inclination  
Magnetic Intensity  
Mammals  
Mangroves  
Marine  
Marine Gravity Field  
Marine Magnetics  
Marshes

Maximum/Minimum Temperature  
Mesoscale Convective Complex  
Mesozoic  
Metals  
Metamorphic Rocks  
Methane  
Methane Burden  
Meteorites  
Microalgae  
Microfossils  
Microphyte  
Microwave Imagery  
Mid-Ocean Ridges  
Migratory Rates/Routes  
Millipedes  
Mine Drainage  
Minerals  
Miocene  
Mixing Height  
Molds  
Mollusks  
Momentum  
Monsoons  
Montane Habitat  
Mosses  
Mushrooms  
Mutation  
Mutualism  
Natural Gas  
Neotectonics  
Net Radiation  
Nitrate  
Nitrate Particles  
Nitric Acid  
Nitrite  
Nitrogen  
Nitrogen Compounds  
Nitrogen Dioxide  
Nitrogen Oxides  
Nitrous Oxide  
Non-Metallic Minerals  
Non-Methane Hydrocarbons  
Nuclear Radiation  
Nucleation

Nutrient Cycling  
Nutrients  
Observed Radiance  
Ocean Color  
Ocean Crust Deformation  
Ocean Currents  
Ocean Mixed Layer  
Ocean Plateaus/Ridges  
Ocean Tracers  
Oil Spill  
Oligocene  
Optical Depth  
Optical Thickness  
Orbital Characteristics  
Ordovician  
Organic Carbon  
Organic Matter  
Organic Particles  
Oscillations  
Outgoing Longwave Radiation  
Overturning  
Oxidation/Reduction  
Oxygen  
Oxygen Demand  
Oxygen Isotopes  
Ozone  
Ozone Burden  
Ozone Profile  
Paleocene  
Paleomagnetic Data  
Paleomagnetism  
Paleosols  
Paleovegetation  
Paleozoic  
Palustrine Wetlands  
Parasitism  
Particle Composition  
Particle Density  
Particle Distribution Functions  
Particle Flux  
Particle Speed  
Particle Temperature  
Particulate Matter  
Particulates

Peatlands  
Pelagic Habitat  
Percolation  
Permafrost  
Permian  
Petroleum  
pH  
Phase and Amplitude  
Phosphate  
Phosphorus  
Photic Zone  
Photolysis Rates  
Photosynthesis  
Photosynthetically Active Radiation  
Physiological Parameters  
Phytoplankton  
Pigments  
Pipelines  
Planetary Boundary Layer  
Plankton  
Plant Characteristics  
Pleistocene  
Pliocene  
Polar Motion  
Political Divisions  
Pollen  
Polynyas  
Population Dynamics  
Post-Breeding  
Potential Density  
Potential Temperature  
Precambrian  
Precipitable Water  
Precipitation Amount  
Precipitation Anomalies  
Precipitation Rate  
Predation  
Pressure Anomalies  
Pressure Tendency  
Pressure Thickness  
Primary Production  
Protist  
Proton Flux  
Public Health

Pycnocline  
Pyroclastics  
Quaternary  
Radar Backscatter  
Radar Cross-Section  
Radar Imagery  
Radar Reflectivity  
Radiance  
Radiative Flux  
Radiative Forcing  
Radio Wave  
Radioactive Elements  
Radiocarbon  
Radioisotopes  
Radiolarians  
Rain  
Range Changes  
Reef Habitat  
Reference Fields  
Reference Systems  
Reflectance  
Reforestation  
Relief  
Reptiles  
Respiration  
Restoration  
Rift Valleys  
Riparian Wetlands  
River Ice  
Rivers/Stream Habitat  
Rivers/Streams  
Rocky Coasts  
Rotational Variations  
Roundworms  
Runoff  
Saline Lakes  
Salinity  
Salt Transport  
Saltwater Intrusion  
Satellite Orbits  
Savanna  
Scattering  
Scavenging  
Sea Ice Elevation

Sea Level Pressure  
Sea Level Rise  
Sea State  
Sea Surface Height  
Sea Surface Reflectance  
Sea Surface Slope  
Sea Surface Temperature  
Seafloor Spreading  
Seafloor Topography  
Seamounts  
Secchi Depth  
Secondary Production  
Sediment Chemistry  
Sediment Composition  
Sediment Grain Size  
Sediment Transport  
Sedimentary Rocks  
Sedimentation  
Sediments  
Segmented worms  
Seiches  
Seismic Body Waves  
Seismic Profile  
Seismic Surface Waves  
Selection  
Sensor Counts  
Sewage  
Shoals  
Shoreline Displacement  
Shorelines  
Shortwave Radiation  
Shrubland/Scrub  
Sigma Naught  
Significant Wave Height  
Silicate  
Siliceous Sediments  
Silurian  
Sink Temperature  
Sinkholes  
Skin Temperature  
Sleet  
Slime molds  
Smog  
Snow

Snow Cover  
Snow Depth  
Snow Energy Balance  
Snow Facies  
Snow Melt  
Snow Water Equivalent  
Snow/Ice Temperature  
Social Behavior  
Soil Absorption  
Soil Bulk Density  
Soil Chemistry  
Soil Color  
Soil Compaction  
Soil Consistence  
Soil Depth  
Soil Fertility  
Soil Heat Budget  
Soil Horizons/Profile  
Soil Impedance  
Soil Mechanics  
Soil Moisture  
Soil Plasticity  
Soil Porosity  
Soil Productivity  
Soil Respiration  
Soil Structure  
Soil Temperature  
Soil Texture  
Soil Types  
Solar Active Regions  
Solar Events  
Solar Flares  
Solar Imagery  
Solar Irradiance  
Solar Oscillations  
Solar Prominences  
Solar Radiation  
Solar Radio Waves  
Solar Ultraviolet  
Solar X-Rays  
Sponges  
Sporozoans  
Springs  
Stability

Stable Isotopes  
Stage Height  
Static Pressure  
Static Temperature  
Station Height  
Storm Surge  
Storms  
Strain  
Stratigraphic Sequence  
Stratopause  
Stream Chemistry  
Streamfunctions  
Stress  
Subduction  
Sublimation  
Submarine Canyons  
Succession  
Sulfate Particles  
Sulfur Dioxide  
Sulfur Oxides  
Sunshine  
Sunspots  
Surf Beat  
Surface Air Temperature  
Surface Pressure  
Surface Roughness  
Surface Winds  
Surveys  
Survival  
Suspended Solids  
Swamps  
Swells  
Symbiosis  
Synoptic Maps  
Temperative Profile  
Temperature Anomalies  
Terrain Elevation  
Terrigenous Sediments  
Tertiary  
Thermal Conductivity  
Thermal Infrared  
Thermal Properties  
Thermocline  
Thermohaline Circulation

Tidal Components  
Tidal Currents  
Tidal Height  
Tidal Range  
Topographic Effects  
Tornados  
Total Surface Water  
Toxic Chemicals  
Toxicity  
Trace Elements  
Trace Gases  
Trace Metals  
Transmittance  
Transportation  
Tree Rings  
Trenches  
Triassic  
Trophic Dynamics  
Tropopause  
Tropospheric Ozone  
Tsunamis  
Turbidity  
Turbulence  
Typhoons  
Ultraviolet Flux  
Ultraviolet Radiation  
Ultraviolet Sensor Temperature  
Upper Level Winds  
Upwelling  
Urban Land  
Urbanization  
Varve Deposits  
Vegetation Cover  
Vegetation Index  
Vegetation Species  
Velocity Fields  
Vertebrates  
Vertical Wind Motion  
Virtual Temperature  
Visibility  
Visible Flux  
Visible Imagery  
Visible Radiation  
Vital Statistics

Volatile Organic Compounds  
Volcanic Ash/Dust  
Volcanic Deposits  
Volcanic Gases  
Vorticity  
Water-leaving Radiance  
Water Channels  
Water Depth  
Water Management  
Water Masses  
Water Pressure  
Water Table  
Water Temperature  
Water Vapor  
Water Vapor Burden  
Water Vapor Profile  
Water Yield  
Wave Frequency  
Wave Height  
Wave Length  
Wave Period  
Wave Spectra  
Wave Speed/Direction  
Wave Types  
Weathering  
Wetlands  
Whiteout  
Wind-Driven Circulation  
Wind Chill  
Wind Shear  
Wind Stress  
Wind Waves  
X-Ray  
Yeast  
Zooplankton

## **ElectronicMailAddress**

### **Description**

The address of the electronic mailbox of the organization or individual. The address, following NASA Global Change Master Directory format, should be of the form 'network name>network address'. Examples of network names are NSN, SPAN, telemail, ARPANET, and Internet. Examples of network addresses are NSSDCA::NG, MIKEMARTIN/NASA, MMARTIN@JPL.MILVAX, or [mikem@eos.hitic.com](mailto:mikem@eos.hitic.com).

Content Source: DP

Alias: Email address

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Email

## **EllipsoidName**

### **Description**

Identification given to established representation of the Earth's shape.

Content Source: DP

Constraints: EllipsoidName is mandatory if GeodeticModel class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
GeodeticModel

## **Description**

Airy 1940 - applies to UK  
Australian National 1965 - applies to Australia  
Bessel 1841  
Clarke 1866  
Clarke 1880  
Everest 1830 - applies to Asia  
Geodetic Reference System 1980 (GRS80)  
Hough  
IAU 1976 - International Astronomical Union  
International 1909 (Hayford)  
Krassovsky 1940 - applies to former USSR  
Mercury 1960 (Fischer 1960) - supports early heritage NASA satellite  
Modified Airy - applies to UK  
Modified Everest - applies to Asia  
Modified Mercury 1968 (Modified Fischer 1960) - supports early heritage NASA satellite  
New International 1967  
World Geodetic System of 1966 (WGS66)  
World Geodetic System of 1972 (WGS72)  
World Geodetic System of 1984 (WGS84)

## **EndsatPresentFlag**

### **Description**

This attribute will denote that a data collection which covers, temporally, a discontinuous range, currently ends at the present date. This way, the granules, which comprise the data collection, that are continuously being added to inventory need not update the data collection metadata for each one. Note that MODIS granules may be added several thousand times a day, making the update of the data collection metadata impractical.

Content Source: DSS

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
Temporal

## **Description**

Y = Yes, does end at present time.

N = No, does not end at present time.

## **EquatorCrossingDate**

### **Description**

This attribute represents the date of the descending equator crossing.

Content Source: PGE

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
OrbitCalculatedSpatialDomain

## **EquatorCrossingLongitude**

### **Description**

This attribute represents the terrestrial longitude of the descending equator crossing.

Content Source: PGE

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
OrbitCalculatedSpatialDomain

## **EquatorCrossingTime**

### **Description**

This attribute represents the time of the descending equator crossing.

Content Source: PGE

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
OrbitCalculatedSpatialDomain

## **ExclusionGRingFlag**

### **Description**

Flag which determines if the coordinates represent the Outer or Exclusion G-Ring.

Content Source: PGE(granule); DP(collection)

Constraints: ExclusionGRingFlag is mandatory if GRing class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
GPolygon

### **Description**

Y - Value denotes geodetic latitude or longitude of the starting point of arc of an inner (exclusion) G-Ring.

N - Value denotes geodetic latitude or longitude of the starting point of an arc of an outer G-Ring.

## **ExpirationDate**

### **Description**

Date Advertisement expired.

### **Reference List**

Name
AdvertisementMaster

## **FtpURL**

### **Description**

Universal Resource Locator that contains a reference to the location of an installable package.

### **Reference List**

Name
InstallableServiceAdvertisement

## **FutureReviewDate**

### **Description**

Date of next planned QA peer review.

Content Source: DP; PGE

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
Review

## **GeographicalRegionName**

### **Description**

Contains a name for the geographical region the Regional Area Definition Guide applies to. Example values could be: Nile Delta, Sahel Zone, Mississippi Valley, Sudanian Zone, Amazon Basin, Grand Canyon.

Content Source: DP

Constraints: if class utilized, this must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
RegionalAreaDefinitionGuide

### **Description**

Free Text

## **GeographicCoordinateDescription**

### **Description**

Free Text

## **GeographicCoordinateInformation**

### **Description**

Free Text

## **GeographicCoordinateUnits**

### **Description**

Units of measure used for the geodetic latitude and longitude resolution values. For lat, a 2 digit decimal number from 0-90; for lon, a 3 digit decimal number from 0-180. + or absence of - for values north of equator or values west of prime meridian; - for all others.

Content Source: DP

Constraints: GeographicCoordinateUnits are mandatory if GeographicCoordinateSystem class is applicable.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
GeographicCoordinateSystem

## **Description**

Decimal Degrees

Decimal Minutes

Decimal Seconds

Degrees and Decimal Minutes

Degrees, minutes, and decimal seconds

Radians

Grads

## **GIParameterList**

## **Description**

Describes the parameters that should be passed to a service when the service is executed. The content of the list is dependent upon the type of service (i.e. acquire, browse, subset, etc.).

Content Source: IOS

## **Reference List**

Name
SignatureServiceAdvertisement

## **GranulePointer**

## **Description**

Pointer to a granule specification.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ECSDataGranule

## **GridCoordinateSystemName**

### **Description**

Name of the Grid Coordinate System. A plane-rectangular coordinate system usually based on, and mathematically adjusted to a map projection so that geographic positions can be readily transformed to and from plane coordinates. The zone identifier can be allocated per granule; hence the class 'ZoneIdentifier'.

Content Source: DP

Constraints:

If GridCoordinateSystem is used, zone identifier must be used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
GridCoordinateSystem

### **Description**

Universal Transverse Mercator (UTM) - Requires UTM zone number, 1-60 for Northern Hemisphere, -60 to -1 for Southern Hemisphere

Other Grid System - Requires description in lieu of zone identifier which includes name, parameters and values, and citation of the specification for the algorithms that describe the mathematical relationship between the Earth and the coordinates of the grid system.

## **GRingPointLatitude**

### **Description**

The geodetic latitude of a point of the G-ring.

Content Source: DP(collection);PGE(granule)

Constraints: GRingPointLatitude <= +90.0

Constraints: GRingPointLatitude is mandatory if GRingPoint class is applicable. Constraints:

GRingPointLatitude => -90.0

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
GPolygonPoint

## **GRingPointLongitude**

### **Description**

The longitude of a point of the G-Ring.

Content Source: DP(collection);PGE(granule)

Constraints: GRingPointLongitude is mandatory if GRingPoint class is applicable. Constraints:

GRingPointLongitude <= +180.0

Constraints: GRingPointLongitude >= -180.0

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
GPolygonPoint

## **GRingPointSequenceNo**

### **Description**

Value denotes the numerical sequence position of a G-Ring point.

Content Source: DP(collection);PGE(granule)

Constraints: GRingPointSequenceNo is mandatory if GRingPoint class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
GPolygonPoint

## **GuideName**

### **Description**

The name of the guide document.

Content Source: DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
Guide

### **Description**

Regional Area Definition Guide

Archive Center Guide

Processing Center Guide

Campaign Guide

Platform Guide

Instrument Guide

ECS Collection Guide

Sensor Guide

Analysis Guide

## **HorizontalDatumName**

### **Description**

The identification given to the reference system used for defining the coordinates of points.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
GeodeticModel

### **Description**

NAD27 - North American Datum of 1927

NAD83 - North American Datum of 1983

## **HoursofService**

### **Description**

Time period when individuals can speak to the organization or individuals.

Content Source: DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Contact

## **Implementation**

### **Description**

The name of the implemented form of the CSDT (standard formats, industry standards etc.), including lowest level object description.

Content Source:

Constraints:

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
CSDTDescription

### **Description**

HDF-EOS - HDF-EOS Datatypes for implementation: HDF Attribute, HDF Attributes, HDF Vdata, HDF (RIS8, RIS24), HDF SDS, SDS with attributes, multiple HDF SDSs, multiple Vdatas.

ASCII

HDF

Binary

netCDF

NMC GRIB

NMC BUFR

CCSDS - Consultative Committee for Space Data Systems establishes variety of standard formats e.g. time, telemetry packages, metadata, etc.

## **IndirectReference**

### **Description**

Name of object by which data are organized. Name is the ESDT related or other local name other than the formal CSDT reference. i.e. 2.5 degree bins for CERES, 5 degree bins for CERES, and source packets for level 0.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
CSDTDescription

## **InputPointer**

### **Description**

Data model logical reference to Input Granule.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
InputGranule

## **InstrumentCharacteristicDataType**

### **Description**

The datatype of the instrument characteristic/attribute defined by InstrumentCharacteristicName.

Content Source: DP (Collection)

Constraints: Must exist if SensorCharacteristicValue exists

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
InstrumentCharacteristic

## **Description**

int

varchar

datetime

date

time

float

## **InstrumentCharacteristicDescription**

### **Description**

The description of the instrument attribute.

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
InstrumentCharacteristic

## **InstrumentCharacteristicName**

### **Description**

The name of the instrument characteristic attribute. Instrument characteristic are instrument-specific attributes.

Content Source: DP (Collection)

Constraints: Must conform to ECS attribute naming guidelines. Primary Key.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
InstrumentCharacteristic

## **InstrumentCharacteristicUnit**

### **Description**

The units of the attribute defined with InstrumentCharacteristic.

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
InstrumentCharacteristic

## **InstrumentCharacteristicValue**

### **Description**

The value of the Instrument/attribute defined in InstrumentCharacteristic. Attributes must have single values.

Content Source: DP (Collection)

Constraints: Abstract class instantiated as either int:string:date:float.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
InstrumentCharacteristicValueClass

## **InstrumentGuidePointer**

### **Description**

Logical pointer to the Instrument Guide.

Content Source: DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
InstrumentGuide

## **InstrumentLongName**

### **Description**

The expanded name of the primary sensory instrument. (e.g. Advanced Spaceborne Thermal Emission and Reflective Radiometer, Clouds and the Earth's Radiant Energy System, Human Observation)

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
Instrument

## **Description**

Active Cavity Radiometer Irradiance Monitor  
Advanced Spaceborne Thermal Emission and Reflection Radiometer  
Atmospheric Infrared Sounder  
Clouds and the Earth's Radiant Energy System  
Moderate-Resolution Imaging Spectroradiometer  
Measurements of Pollution In The Troposphere  
Microwave Limb Sounder  
Multi-Angle Imaging SpectroRadiometer  
Special Sensor Microwave/Imager  
Stratospheric Aerosol and Gas Experiment III  
Land Remote-Sensing Satellite  
Enhanced Thematic Mapper Plus  
Clouds and the Earth's Radiant Energy System Flight Model 1  
Clouds and the Earth's Radiant Energy System Flight Model 2  
Visible and Infrared Spin Scan Radiometer  
Multispectral Imaging Radiometer  
Geostationary Operational Environmental Satellite Imager  
Geoscience Laser Altimeter System  
Global Positioning System Receiver  
Lightning Imaging Sensor  
Advanced Microwave Scanning Radiometer  
Advanced Microwave Sounding Unit  
Humidity Sounder Brazil

## **InstrumentShortName**

### **Description**

The unique identifier of an instrument. (e.g. ASTER, AVHRR-3, CERES, Human)  
Content Source: DP (Collection); PGE (Granule)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Instrument

## **Description**

ACRIM  
ASTER  
CERES  
MODIS  
MOPITT  
MISR  
MLS  
SAGE III  
ETM+  
CERES FM1  
CERES FM2  
VISSR  
MIR  
SSM/I  
GPS  
GOES Imager  
LIS  
FM1  
FM2  
AMSR  
AMSU-A  
HSB  
AIRS  
GLAS

## **InstrumentTechnique**

### **Description**

The instrument method or procedure.. (e.g. radiometer, manual enumeration)

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Instrument

## **Description**

Broadband scanning radiometry  
Correlation Spectrometry  
Cross-Track Scanning Microwave Sounding  
Cross-Track Scanning Multichannel Microwave Sounding  
Cross-Track Scanning Multispectral Infrared Sounding  
Cross-Track Scanning Sounding  
Earth Limb-Scanning Grating Spectroradiometry  
Imaging Radiometry  
Imaging Spectroradiometry  
Infrared Sounding  
Laser Altimetry  
Laser Altimetry and Light Detection and Radar  
Lunar Occultation  
Microwave Limb Sounding  
Multi-Angle Imaging Spectroradiometry  
Passive Microwave  
Pyrheliometry  
Radionavigation  
Self-calibrating solar/lunar occultation grating spectrometry  
Solar Occultation

## **Internal Name**

### **Description**

Internal service name for ECS subsystem use only.

### **Reference List**

Name
SignatureServiceAdvertisement

## **JournalArticleName**

### **Description**

The name of the journal article.

Content Source: DP

Constraints: must exist if article does.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
JournalArticle

## **JournalArticlePointer**

### **Description**

Data model logical reference to Journal Article.

Content Source: DSS

Constraints: if journal article exists, this must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
JournalArticle

## **LatitudeResolution**

### **Description**

The minimum difference between two adjacent latitude values expressed in Geographic Coordinate Units of measure.

Content Source: DP

Constraints: LatitudeResolution > 0.0

Constraints: LatitudeResolution is mandatory if GeographicCoordinateSystem class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
GeographicCoordinateSystem

## **LocalCoordinateSystemDescription**

### **Description**

A description of the coordinate system and its orientation to the surface of the Earth.

Content Source: DP

Constraints: LocalCoordinateSystemDescription is mandatory if LocalCoordinateSystem class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
LocalCoordinateSystem

### **Description**

Free Text

Central Body, Fixed (CBF)

Central Body, Inertial (CBI)

Local Horizontal (LH)

Vertical Vehicle Local Horizontal (VVLH)

## **LocalGeoreferenceInformation**

### **Description**

A description of the information provided to register the local system to the Earth (e.g. control points, satellite ephemeral data, inertial navigation data).

Content Source: DP

Constraints: LocalGeoreferenceInformation is mandatory if LocalCoordinateSystem class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
LocalCoordinateSystem

## **LocalGranuleID**

### **Description**

Unique identifier for locally produced granule that ECS ingests and is required to capture.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ECSDataGranule

## **LocalityDescription**

### **Description**

This attribute provides the rationale behind including this locality definition in ECS. It should include the area of Earth Science research that requires such a definition, a description of what the locality represents in general terms, and a brief description or reference to a description of the method used as the source of the definition.

Content Source: DP

Constraints: must exist if locality type does.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
Locality

## **LocalityType**

### **Description**

Type of entity for which space/time extent is defined. Spatial and temporal domain will be used to define coverage of the data granule; or to define the varying spatial extent over time, of some geophysical event/ phenomena eg. Mid-west Flood of 93, or of certain seasons throughout the world, eg. monsoon season, or spring. It may be used to define the spatial and/or temporal extent of a 'region', be it geophysical or geopolitical in nature. The value is applied at the granule level.

Content Source: DP

Constraints: mandatory if class is applicable and if granule locality is used.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
Locality

## **LocalityValue**

### **Description**

Provides name which spatial/temporal entity is known. This could change on a granule by granule basis. This attribute is paralleled by the AggregationType which applies at the collection level although locality has a more restricted usage. Several locality measures could be included in each granule.

Content Source: PGE

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
GranuleLocality

### **Description**

Canada/R - Regional Canada sites

Cryos – Cryosphere

Global

Land - Global land surface

Land/Cryos - Land ice and Snow regions.

Land/CZ - Land w/ Coastal Zone

Land/L - Local land sites

Land/R - Regional land sites

Limb - Limb sounding

Local Surface - Local sites

Ocean/Cryos - Regions with sea ice

Ocean/I - Ocean with Case I sediments

Ocean/II - Ocean with Case II sediments

Ocean/L - Local oceanic sites

Ocean/R - Regional oceanic sites

Ocean/S - Southern Ocean

Ocean/SA - Southern & Eastern North Atlantic

Polar - Latitudes > 60 degrees N and S

Tropic - Zonal Band 35 degrees N to 35 degrees S

Wetlands - Global wetlands

## **LocalPlanarCoordinateSystemDescription**

### **Description**

A description of the local planar coordinate system.

Content Source: DP

Constraints: LocalPlanarCoordinateSystemDescription is mandatory if LocalPlanarCoordinateSystem class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
LocalPlanarCoordinateSystem

## **Description**

Free Text

## **LocalPlanarGeoreferenceInformation**

### **Description**

A description of the information provided to register the local planar system to the Earth (e.g. control points, satellite ephemeral data, and inertial navigation data)

Content Source: DP

Constraints: LocalGeoreferenceInformation is mandatory if LocalCoordinateSystem class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
LocalPlanarCoordinateSystem

## **LocalVersionID**

### **Description**

Local version identifier for PGE defined granule versions.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ECSDataGranule

## **LongitudeResolution**

### **Description**

The minimum difference between two adjacent longitude values expressed in Geographic Coordinate Units of measure.

Content Source: DP

Constraints: LongitudeResolution > 0.0

Constraints: LongitudeResolution is mandatory if GeographicCoordinateSystem class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
GeographicCoordinateSystem

## **LongName**

### **Description**

This attribute will identify the long name associated with the collection. This includes dataset name/product name. This is the reference name used in describing the scientific contents of the data collection; it is not the 'id' of the data. The existing SPSO product names provide a start point.

Content Source: DP

Alias: dataset name

product name

Constraints: must be unique

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
CollectionDescriptionClass

## **Description**

reference RTM ECS ESDT LongName Baseline and proposed ESDT LongName Baseline on EDHS

## **MaintenanceandUpdateFrequency**

### **Description**

The frequency with which changes and additions are made to the collection after the initial dataset begins to be collected/processed.

None Planned - The collection is complete and therefore will not be updated further.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
SingleTypeCollection

## **Description**

Continually - The collection is updated more frequently than once a day.

Daily - The collection is updated once per day, every day.

Weekly - The collection is updated once per week.

Monthly - The collection is updated once per calendar month.

Annually - The collection is updated once per year; the first date of update is usually one year after the first date of receipt of data from this collection's source.

Unknown

As Needed - The collection is updated as determined by the Principal Investigator or according to on-demand requests from end users.

Irregular - The collection is updated on an unscheduled but periodic basis.

## **MapProjectionName**

### **Description**

The name of the systematic representation of all or part of the surface of the Earth on a plane or developable surface.

Content Source: DP

Constraints: MapProjectionName is mandatory if MapProjection class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
MapProjection

### **Description**

Lambert Azimuthal Equal Area - Requires standard parallel, longitude and scale factor of central meridian, latitude/longitude and scale factor of projection origin, false easting and northing, scale factor at equator & center line, height of perspective point above the surface, latitude/longitude of projection center, oblique line azimuth (angle+lat of origin), oblique line point (lat/lon), straight vertical longitude from pole.

Polar Stereographic - Requires standard parallel, longitude and scale factor of central meridian, latitude/longitude and scale factor of projection origin, false easting and northing, scale factor at equator & center line, height of perspective point above the surface, latitude/longitude of projection center, oblique line azimuth (angle+lat of origin), oblique line point (lat/lon), straight vertical longitude from pole.

Space Oblique Mercator B - Requires standard parallel, longitude and scale factor of central meridian, latitude/longitude and scale factor of projection origin, false easting and northing, scale factor at equator & center line, height of perspective point above the surface, latitude/longitude of projection center, oblique line azimuth (angle+lat of origin), oblique line point (lat/lon), straight vertical longitude from pole, plus the Landsat Satellite Number and the Path Number reflecting the orbit if the Landsat satellite.

Transverse Mercator - Requires standard parallel, longitude and scale factor of central meridian, latitude/longitude and scale factor of projection origin, false easting and northing, scale factor at equator & center line, height of perspective point above the surface, latitude/longitude of projection center, oblique line azimuth (angle+lat of origin), oblique line point (lat/lon), straight vertical longitude from pole.

Lambert Conformal Conic

Mercator

Polyconic

Integerized Sinusoidal Grid

Interrupted Goode Homolosine - A pseudocylindrical composite derived from the Sinusoidal and Mollweide projections.

Equirectangular - The meridians and parallels are all equidistant straight parallel lines, the two sets crossing at right angles. A form of the Equidistant Cylindrical and Equidistant Conic projection where the two standard parallels are symmetrical about the Equator. However, if the Equator is made the standard parallel, true to scale and free of distortion, the meridians are spaced at the same distances as the parallels, and the graticule appears square. This form is called the Plate Caree.

Equidistant Conic - The simplest kind of conic projection with its equally spaced straight meridians and equally spaced circular parallels. If the one standard parallel is the Equator, the Equidistant Conic projection becomes the Plate Caree form of the Equidistant Cylindrical, but the formulas must be changed. If the two standard parallels are symmetrical about the Equator, the Equirectangular results. If the standard parallel is the pole, the Azimuthal Equidistant projection is obtained.

Azimuthal Equidistant - It has the azimuthal characteristic that all directions or azimuths are correct when measured from the center of the projection. As its special feature, all distances are at true scale when measured between this center and any other point on the map. The polar aspect, like other polar azimuthals, has circles for parallels of latitude, all centered about the North or South Pole, and equally spaced radii of these circles for meridians. The parallels are spaced equidistantly on the spherical form.

## **MapProjectionPointer**

### **Description**

This is a data modeling logical reference to a map projection.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
MapProjection

## **MultipleDateTimeName**

### **Description**

The name of the collection of discrete date/time events.  
e.g. 'LIS 10/93 series'

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
MultipleDateTimePeriod

## **NorthBoundingCoordinate**

### **Description**

Northern-most coordinate of the limit of coverage expressed in geodetic latitude.

Content Source: DP(collection);PGE(granule)

Constraints: NorthBoundingCoordinate not null for collection only.

Constraints: NorthBoundingCoordinate <= +90.0

Constraints: NorthBoundingCoordinate => -90.0

Constraints: NorthBoundingCoordinate => SouthBoundingCoordinate

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
BoundingRectangle

## **NumberofSensors**

### **Description**

The number of discrete (if any) sensors on an instrument.

Content Source: DP (Collection)

Constraints: Must correspond to sensors associated via SensorShortName

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Instrument

## **OperationalQualityFlag**

### **Description**

The granule level flag applying both generally to a granule and specifically to parameters at the granule level. When applied to parameter, the flag refers to the quality of that parameter for the granule (as applicable). The parameters determining whether the flag is set are defined by the developers and documented in the QualityFlagExplanation.

Content Source: DAAC

Constraints: One flag from QAFlags must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
QAFlags

### **Description**

Passed - The granule (forparameter) has passed a specified operational test.

Failed - The granule (forparameter) has failed a specified operational test.

Being Investigated - The granule (forparameter) is suspect and being investigated using a operational test.

Not Investigated - The granule (forparameter) has not been investigated by DAAC operational staff.

Inferred Passed

Inferred Failed

Suspect

## **OperationalQualityFlagExplanation**

### **Description**

A text explanation of the criteria used to set operational quality flag; including thresholds or other criteria.

## **Reference List**

Name
QAFlags

## **Description**

Free Text

## **OperationMode**

### **Description**

Mode of operation of the instrument. Each instrument will have 1 to n modes which may be static for the collection, or change on a granule-by-granule basis. (e.g. domains: launch, survival, initialization, safe, diagnostic, roll, tilt, standby, routine, test, calibration).

Content Source: DP(collection);PGE(granule)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
OperationModeClass

### **Description**

Calibration

Diagnostic

Fixed azimuth scan - Fixed azimuth plane scan.

Initialization

Launch

Normal

Roll

Rot. azimuth scan - Rotating azimuth plane scan

Routine

Safe

Solar calibration

Standby

Survival

Test

Tilt  
IR&Visible  
IR  
Both  
Other

## **OperationsManualPointer**

### **Description**

Data model logical reference to Operations Manual.

Content Source:

Constraints: If Operations Manual exists then OperationsManualPointer must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
OperationsManual

## **OrbitalModelName**

### **Description**

The reference to the orbital model to be used to calculate the geolocation of this data in order to determine global spatial extent.

Content Source: DP

Constraints: OrbitmodelName is mandatory if OrbitCalculatedSpatialDomain class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
OrbitCalculatedSpatialDomain

### **Description**

Free Text

## **OrbitNumber**

### **Description**

The orbit number to be used in calculating the spatial extent of this data.

Content Source: PGE

Constraints: constraints should be provided per satellite

Constraints: OrbitNumber is mandatory if OrbitCalculatedSpatialDomain class is applicable.

Constraints: OrbitNumber > 0

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
OrbitCalculatedSpatialDomain

## **OrbitParametersPointer**

### **Description**

Data model reference to the orbit parameter information.

Content Source: DSS

Constraints: Orbit file must exist if OrbitParametersPointer is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
OrbitParametersGranule

## **OrdinateResolution**

### **Description**

The (nominal) minimum distance between the 'y' or row values of two adjacent points, expressed in Planar Distance Units of measure. Planar Distance Units of measure are units for distances whose domain values are meters, international feet, and survey feet.

Content Source: DP

Constraints: OrdinateResolution > 0.0

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
CoordinateRepresentation

## **PackageSize**

### **Description**

Size of Package for the Installable Service. Each package size contains 'x' bytes.

### **Reference List**

Name
InstallableServiceAdvertisement

## **ParameterMeasurementResolution**

### **Description**

This attribute will be used to identify the smallest unit increment to which the parameter value is measured.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
PhysicalParameterDetails

## **ParameterName**

### **Description**

The measured science parameter expressed in the data granule.

## **Reference List**

Name
MeasuredParameter

## **ParameterRangeBegin**

### **Description**

The minimum value of the range.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
PhysicalParameterDetails

## **ParameterRangeEnd**

### **Description**

The maximum value of the range.

Content Source: DP

## **Reference List**

Name
PhysicalParameterDetails

## **ParameterUnitsofMeasurement**

### **Description**

The standard units of measurement for a non-core attribute. AVHRR: Units of Geophysical Parameter=Units of Geophysical Parameter

Content Source: DP

Constraints: If ParameterValue exists then ParameterUnitsofMeasurement exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
PhysicalParameterDetails

### **Description**

Free Text

## **ParameterValue**

### **Description**

The values that can be assigned to a parameter name used at collection and granule level. The datatype for this attribute is the value of the attribute ParameterDatatype. The unit for this attribute is the value of the attribute ParameterUnitsofMeasurement.

Content Source: DP(collection); PGE(granule)

Constraints: If ParameterValue exists then the class ECSParameter must exist. Constraints: If parameter is physical then units must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
InformationContent

## **ParameterValueAccuracy**

### **Description**

An estimate of the accuracy of the assignment of attribute value. i.e. AVHRR: Measurement Error or Precision=Measurement error or precision of a data product parameter. This can be specified in percent or the units with which the parameter is measured.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
PhysicalParameterDetails

## **ParameterValueAccuracyExplanation**

### **Description**

This defines the method used for determining the Parameter Value Accuracy that is given for this non core attribute.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
PhysicalParameterDetails

## **PerformanceTestResultsPointer**

### **Description**

Data model logical reference to Performance Test Results document.

Content Source: DSS

Constraints: If Performance Test Results exist then PerformanceTestResultsPointer must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
PerformanceTestResults

## **Period1stDate**

### **Description**

This attribute provides the date of the first occurrence of this regularly occurring period which is relevant to the collection, granule, or event coverage.

Content Source: DP

Constraints:

Period1stDate is mandatory if RegularPeriodic class is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
RegularPeriodic

## **Period1stTime**

### **Description**

This attribute denotes the time of the first occurrence of this regularly occurring period which is relevant to the collection, granule, or event coverage.

Content Source: DP

Constraints:

Period1stTime is mandatory if RegularPeriodic class is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
RegularPeriodic

## **PeriodCycleDurationUnit**

### **Description**

The unit specification of the period cycle duration.

e.g. the RegularPeriodic event 'Spring-North Hemi' might have a

PeriodDurationUnit='month'

PeriodDurationValue=3.0

PeriodCycleDurationUnit='year'

PeriodCycleDurationValue='1.0'

indicating that Spring-North Hemi lasts for 3.0 months and has a cycle duration of 1 year.

Example values include:

decade,

year,

month,

week,

day,

hour,

minute,

second,

microsecond,

millisecond

Content Source: DP

Constraints:

PeriodCycleDurationUnit is mandatory if RegularPeriodic class is used.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
RegularPeriodic

## **PeriodCycleDurationValue**

### **Description**

The number of PeriodCycleDurationUnits in the period cycle.

e.g. the RegularPeriodic event 'Spring-North Hemi' might have a PeriodDurationUnit='month'  
PeriodDurationValue=3.0

PeriodCycleDurationUnit='year'

PeriodCycleDurationValue='1.0'

indicating that Spring-North Hemi lasts for 3.0 months and has a cycle duration of 1.0 year.

The unit for this attribute is the value of the attribute PeriodCycleDurationUnit.

Content Source: DP

Constraints:

PeriodCycleDurationValue > 0.0 if used.

Constraints:

PeriodCycleDurationValue is mandatory if RegularPeriodic class is used.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
RegularPeriodic

## **PeriodDurationUnit**

### **Description**

The unit specification for the period duration.

Example values include:

decade,  
year,  
month,  
week,  
day,  
hour,  
minute,  
second,  
microsecond,  
millisecond

Content Source: DP

Constraints:

PeriodDurationUnit is mandatory if RegularPeriodic class is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
RegularPeriodic

### **Description**

Free Text

## **PeriodDurationValue**

### **Description**

The number of PeriodDurationUnits in the RegularPeriodic period.

e.g. the RegularPeriodic event 'Spring-North Hemi' might have a PeriodDurationUnit='month'

PeriodDurationValue=3.0

PeriodCycleDurationUnit='year'

PeriodCycleDurationValue='1.0

indicating that Spring-North Hemi lasts for 3.0 months and has a cycle duration of 1.0 year.

The unit for the attribute is the value of the attribute PeriodDurationValue.

Content Source: DP

Constraints:

PeriodDurationValue > 0.0 if used.

Constraints:

PeriodDurationValue is mandatory if RegularPeriodic class is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
RegularPeriodic

## **PeriodName**

### **Description**

The name given to the recurring time period.

e.g. 'spring - north hemi.'

Content Source: DP

Constraints:

PeriodName is mandatory if RegularPeriodic class is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
RegularPeriodic

### **Description**

Free Text

## **PGEDateLastModified**

### **Description**

Date when PGE information was last modified.

### **Reference List**

Name
AlgorithmPackage

## **PGEFunction**

### **Description**

Function(s) performed by PGE.

Content Source: DP

Constraints:

If Delivered Algorithm Package is utilized then PGEFunction must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
AlgorithmPackage

## **PGEIdentifier**

### **Description**

Each PGE is to have a unique identifier assigned by the SDPS/W developer. This unique identifier may be one component of a longer name that includes instrument acronym, PGE version number, and release date.

Content Source: DP; DAAC

Constraints:

If Delivered Algorithm Package is utilized then PGEIdentifier exists.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
AlgorithmPackage

## **PGEName**

### **Description**

Name of Product Generation Executive.

Content Source: DP

Constraints:

If Delivered Algorithm Package is utilized then PGEName exists.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
AlgorithmPackage

### **Description**

Free Text

## **PGEVersion**

### **Description**

Version of PGE, updated whenever code or any static is input in the Delivered Algorithm Package.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
AlgorithmPackage

## **PlanarCoordinateEncodingMethod**

### **Description**

The means used to represent horizontal positions in the planar coordinate system.

Content Source: DP

Constraints: PlanarCoordinateEncodingMethod is mandatory if map projection, grid coordinate system, or local planar coordinate system is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
PlanarCoordinateInformation

Distance and Bearing - Will require encoding method description using 'Distance and Bearing Representation', in terms of distance resolution, bearing resolution, bearing units, bearing reference direction, and bearing reference meridian.

Row and Column - Will require encoding method description using 'Coordinate Representation', in terms of abscissa and ordinate resolutions.

Coordinate Pair - Will require description of encoding method in 'Coordinate Representation' in terms of abscissa and ordinate resolutions.

## **PlanarDistanceUnits**

### **Description**

Units of measure used for planar coordinate description distances.

Content Source: DP

Constraints: PlanarDistanceUnits are mandatory if map projection, grid coordinate system, or local planar coordinate system is used.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
PlanarCoordinateInformation

## **Description**

meters

## **PlannedDataSets**

### **Description**

Copy of content of line 5 of Production Plans; containing collection ShortName to be produced.

Content Source: PLS

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ProductionPlan

## **PlatformCharacteristicDataType**

### **Description**

The datatype of the Platform Characteristic/attribute defined by PlatformCharacteristicName.

Content Source: DP (Collection).

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
PlatformCharacteristic

## **Description**

int  
varchar  
datetime  
date  
time  
float

## **PlatformCharacteristicDescription**

### **Description**

Description of the Platform Characteristic attribute.

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
PlatformCharacteristic

## **PlatformCharacteristicName**

### **Description**

The name of the Platform Characteristic attribute.

Content Source: DP (Collection)

## **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
PlatformCharacteristic

## **PlatformCharacteristicUnit**

### **Description**

Units associated with the Platform Characteristic attribute value.

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
PlatformCharacteristic

## **PlatformCharacteristicValue**

### **Description**

The value of the characteristic/attribute defined in PlatformCharacteristic. Attributes must have single values. (e.g. Model Number = 209).

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
PlatformCharacteristicValueClass

## **PlatformGuidePointer**

### **Description**

Logical pointer to the Platform Guide.

Content Source: DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
PlatformGuide

## **PlatformLongName**

### **Description**

The expanded or long name of the platform associated with an instrument.

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Platform

### **Description**

Active Cavity Radiometer Irradiance Monitor Satellite

Advanced Earth Observing Satellite II

Ante Meridian-1

Landsat-7

Meteor-3M

First EOS Chemistry Mission Satellite, 1:45 PM Ascending Equator Crossing

First EOS Polar Orbiting Satellite, 10:30 AM Descending Equator Crossing

First EOS Polar Orbiting Satellite, 1:30 PM Ascending Equator Crossing

Geostationary Meteorological Satellite-1

Geostationary Meteorological Satellite-2

Geostationary Meteorological Satellite-3  
Geostationary Meteorological Satellite-4  
Geostationary Meteorological Satellite-5  
Geostationary Operational Environmental Satellite-1  
Geostationary Operational Environmental Satellite-2  
Geostationary Operational Environmental Satellite-3  
Geostationary Operational Environmental Satellite-4  
Geostationary Operational Environmental Satellite-5  
Geostationary Operational Environmental Satellite-6  
Geostationary Operational Environmental Satellite-7  
Geostationary Operational Environmental Satellite-8  
Geostationary Operational Environmental Satellite-9  
Ice, Cloud and Land Elevation Satellite  
Meteorological Satellite-1  
Meteorological Satellite-2  
Meteorological Satellite-3  
Meteorological Satellite-4  
Meteorological Satellite-5  
Meteorological Satellite-6  
Meteorological Satellite-7  
NOAA Polar Operational Environmental Satellite-6  
NOAA Polar Operational Environmental Satellite-7  
NOAA Polar Operational Environmental Satellite-8  
NOAA Polar Operational Environmental Satellite-9  
NOAA Polar Operational Environmental Satellite-10  
NOAA Polar Operational Environmental Satellite-11  
NOAA Polar Operational Environmental Satellite-12  
NOAA Polar Operational Environmental Satellite-14  
Television and Infrared Observation Satellite-N  
Tropical Rainfall Measuring Mission  
Defense Meteorological Satellite Program-F11  
Defense Meteorological Satellite Program-F13

## **PlatformShortName**

### **Description**

The unique platform name. (e.g. GOES-8)

Content Source: DP(Collection); PGE(Granule)

## **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
Platform

## **Description**

ACRIMSAT

ADEOS-II

AM-1

Aqua

CHEM-1

L7 - Landsat-7

Meteor-3M

GMS-1

GMS-2

GMS-3

GMS-4

GMS-5

GOES-1

GOES-2

GOES-3

GOES-4

GOES-5

GOES-6

GOES-7

GOES-8

GOES-9

METEOSAT-1

METEOSAT-2

METEOSAT-3

METEOSAT-4

METEOSAT-5

METEOSAT-6

METEOSAT-7

NOAA-6

NOAA-7

NOAA-8

NOAA-9

NOAA-10

NOAA-11  
NOAA-12  
NOAA-14  
Terra  
TIROS-N  
TRMM  
DMSP-F11  
DMSP-F13  
ICESat

## **PlatformType**

### **Description**

The most relevant platform type.

Content Source: DP (Collection); PGE (Granule)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Platform

### **Description**

Aircraft - including balloons  
Buoy  
Human  
Network  
Other - e.g. animal mounted instruments  
Platform  
Spacecraft  
Station  
Vehicle  
Vessel (Ship)

## **PointLatitude**

### **Description**

A single geodetic latitudinal value.

Content Source: DP(collection);PGE(granule)

Constraints: PointLatitude is mandatory if Point class is applicable.

Constraints: PointLatitude => -90.0 Constraints: PointLatitude <= +90.0

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
Point

## **PointLongitude**

### **Description**

A single longitudinal value.

Content Source: DP(collection);PGE(granule)

Alias: Decimal Degrees

Constraints: PointLongitude is mandatory if Point class is applicable.

Constraints: PointLongitude => -180.0 Constraints: PointLongitude <= +180.0

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
Point

## **PostalCode**

### **Description**

The zip or other postal code of the address.

Content Source: DP; DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
ContactAddress

### **Description**

Free Text

## **PrecisionofSeconds**

### **Description**

The precision (position in number of places to right of decimal point) of seconds used in measurement.

Content Source: DP

Constraints:

PrecisionofSeconds => 0

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
Temporal

## **PrimaryCSDT**

### **Description**

The name of the CSDT type of data organization (data type and sub type). Computer Science Data Types are the physical storage types required to support Earth Science Data Types(ESDTs), the logical objects seen in pyramid views.

Content Source: DP; DAAC

Alias: Data Format

Constraints:

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
CSDTDescription

### **Description**

Plain ASCII Text - Free-form textual structure for storing labels or long descriptions for display.

RTF Formatted ASCII Text - Formatted text for transfer in Rich Text Format.

HTML Formatted ASCII Text - Formatted text for transfer in HyperText Markup Language.

PS Formatted ASCII Text - Formatted text for transfer in Postscript.

PDF Formatted ASCII Text - Formatted text for transfer in Portable Document Format.

Binary ASCII Text - Text and graphics document in document processing application proprietary format.

P=V Metadata - 'Label=Value' where label is a field name and value is either a single value or list of values.

Standard Science Data Table - Binary and/or ASCII tabular data.

Indexed Science Data Table - Binary and/or ASCII tabular data which includes indices to other data objects.

Image - 2D raster data type.

n-Dim Array of Records - Binary n-dimensional array of cells that consist of records. A record can consist of multiple fields of varying type such as integer, floating point and string.

**n-Dim Array of Scalars** - Binary n-dimensional array of cells that consist of scalars of a single type. (e.g., one of 8-, 16- or 32-bit signed or unsigned integers; or 32- or 64-bit floating point). Can be conceptually viewed as an instantiation of the Array of Records where each record is a single field.

**Projected Grid** - Data which has been projected and binned into a rectangular grid using a known methodology. Metadata such as projection name, projection limits, and geometry are included in order to identify geo-location and coverage of grid cells.

**Structured Grid** - Data which has been projected and binned into a non-rectilinear data structure using a known methodology. Metadata such as projection name, projection limits, and geometry are included in order to identify geo-location and coverage of data structure cells.

**Simple Swath** - Typically, swath data arrays will be two dimensional arrays, corresponding to a 2D 'image' of the ground along the orbital track. Sometimes, though, swath data arrays may be 1D arrays, where there is one element per scan (time, altitude, etc.). Additionally, swath data arrays could have 3 or more dimensions, where the additional dimensions are channel number or altitude. A 'simple' swath structure is designated where every data array is of the same size and resolution.

**Complex Swath** - Created by a sensor making N observations in the across-track direction. The along-track direction causes the footprint to form a ribbon of M scans along the subnadir track. The data forms an array of observations N by M by L (where L is the number of spectral band values taken for each observation time). An additional array of geo-location or observation time data is provided at a resolution equal or lower than the observations. The Complex Swath may have observations of varying resolution.

**Standard Point** - Data made up of records and fields with some set of fields constituting a point location. Fields can be of any type. The location fields, taken together, can be considered the 'location record'. Metadata constituting 'header' data which applies to the entire table is included.

**Indexed Point** - Data made up of records and fields with some set of fields constituting a point location. Fields can be of any type including pointers. The location fields, taken together, can be considered the 'location record'. Some fields may be repeated for a set of observations; these fields may be separated as part of a 'header', table which would include pointers, offsets, and counts to the repeating data table or tables.

**Structure** - Group of datatypes. e.g. HDF Vgroup

**CCSDS Packets**

## **ProcessingCenter**

### **Description**

Center where collection was or is being processed. i.e. name of DAAC or SCF.

Content Source: DP; DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ECSCollection

### **Description**

GSFC - Goddard Space Flight Center

LaRC - Langley Research Center

Landsat 7 MOC

ORNL - Oak Ridge National Laboratory

EDC - EROS Data Center

NSIDC - National Snow and Ice Data Center

JPL - Jet Propulsion Laboratory

CIESIN - Consortium for International Earth Science Information Network

EDOS - EOS Data and Operations System

MISR SCF - MISR Science Computing Facility

SAGE III SCF - SAGE III Science Computing Facility

SAGE III MOC - SAGE III Mission Operations Center

ERSDAC - Earth Remote Sensing Data Analysis Center in Japan

AMES

NCDC

NCEP

NESDIS

LIS SCF

MODAPS- MODIS Data Processing Center

ACRIM SCF- ACRIM Science Computing Facility

HATOYAMA

GSFC I-SIPS

AIRS-TLSCF- Atmospheric InfraRed Sounder Team Leader Science Computing Facility

MLS SCF

ASTER\_OSF

## **ProcessingCenterGuidePointer**

### **Description**

Logical pointer to the Processing Center Guide.

Content Source: DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ProcessingCenterGuide

## **ProcessingErrorReportPointer**

### **Description**

Data model reference to Processing Error Report specification.

Content Source: PLS

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ProcessingErrorReport

## **ProcessingFileDescriptionPointer**

### **Description**

Data model logical reference to Processing File Description document.

Content Source: DSS

Constraints: If Processing File Description exists then ProcessingFileDescriptionPointer must exist.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ProcessingFileDescription

## **ProcessingLevelDescription**

### **Description**

This attribute provides a set of characteristics that can be combined to define science processing levels which do not conform to the standards found in ProcessingLevelID.

Content Source: DP

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ProcessingLevel

### **Description**

Ancillary Input- For AIRS (Static Ancillary)

RAW - Raw instruments.

CNTS - Converted to counts.

RADCORR - Radiometrically corrected.

GEOQUANT - Counts converted to geophysical quantities.

GEOLOC - Geolocated.

GRID - Gridded.

Sensor Measurements

Radiometric Counts

Telemetry Data

Transmissions

Level 1B Radiances

Geophysical Quantities at the sensor resolution or geolocated

## **ProcessingLevelID**

### **Description**

This attribute reflects the classification of the science data processing level, which defines in general terms the characteristics of the output of the processing performed.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ProcessingLevel

### **Description**

0 - Raw instrument data at original resolution, time ordered, with duplicate packets removed.

1A - Level 0 data, which may have been reformatted or transformed reversibly, located to a coordinate system, and packaged with needed ancillary and engineering data.

1B - Radiometrically corrected and calibrated data in physical units at full instrument resolution as acquired.

2 - Retrieved environmental variables (e.g., ocean wave height, soil moisture, ice concentration) at the same location and similar resolution as the Level 1 source data.

2G - Similar to Level 2 but contains pixel to grid mappings within the product files.

3 - Data or retrieved environmental variables that have been spatially and/or temporarily resampled (i.e., derived from Level 1 or Level 2 data products). Such resampling may include averaging and compositing.

4 - Model output and/or variables derived from lower level data which are not directly measured by the instruments. For example, new variables based upon a time series of Level 2 or Level 3 data.

NA - Not Applicable - Under review by AHWGP.

## **ProcessingQAAttribute**

### **Description**

This attribute identifies the non-science QA attribute which did not meet pre-defined parameter thresholds during validation processing.

Content Source: PDPS

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ProcessingQA

### **Description**

CalendarDate  
EquatorCrossingDate  
EquatorCrossingLongitude  
EquatorCrossingTime  
LocalityValue  
OrbitalModelName  
OrbitNumber  
ParameterValue  
RangeBeginningDate  
RangeBeginningTime  
RangeEndingDate  
RangeEndingTime  
ReprocessingActual  
ReprocessingPlanning  
ShortName  
SizeMBECSDataGranule  
StartOrbitNumber  
StopOrbitNumber  
TimeOfDay  
VerticalSpatialDomainType  
VerticalSpatialDomainValue

## **ProcessingQADescription**

### **Description**

This attribute provides description of the error encountered during processing for the specified Processing QA Attribute

Content Source: PDPS

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ProcessingQA

### **Description**

Free Text

## **ProcessingReportPeriod**

### **Description**

Period of processing report.

Content Source: PLS

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
ProcessingReport

## **Description**

90

30

7

3

1

## **ProcessingReportType**

### **Description**

Type of processing report supplied by Planning Subsystem.

Content Source: PLS

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
ProcessingReport

## **ProcessingResourceUsageReportPointer**

### **Description**

Data model logical reference to the Processing Resource Usage Report.

Content Source: PLS

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ProcessingResourceUsageReport

## **Description**

Status  
Error  
Rsrc. Usg. - Resource Usage

## **ProcessingStatusReportPointer**

### **Description**

Data model logical reference to the Processing Status Report.

Content Source: PLS

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ProcessingStatusReport

## **ProductionDateTime**

### **Description**

The date and time a specific granule was produced by a PGE.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ECSDataGranule

## **ProductionHistoryPointer**

### **Description**

Data model logical reference to the granule level production history file.

Content Source: DSS

Constraints: Production History log must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ProductionHistory

## **ProductionPlanDescription**

### **Description**

The description of the production plan.

Content Source: PLS

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ProductionPlan

### **Description**

Free Text

## **ProductionPlanEndDate**

### **Description**

The ending date for which the production plan is applicable.

Content Source: PLS

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ProductionPlan

## **ProductionPlanForecast**

### **Description**

The span of time within the plan (measured in days). i.e. the forecast horizon within the production plan.

Content Source: PLS

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ProductionPlan

## **ProductionPlanPointer**

### **Description**

Logical pointer to the production plans produced by the ECS Planning Subsystem.

Content Source: DSS

Constraints: must exist for all ECS-produced products.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ProductionPlan

## **ProductionPlanStartDate**

### **Description**

The beginning date for which the production plan is applicable.

Content Source: PLS

Constraints: must exist for all ECS-produced products.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ProductionPlan

## **ProgrammersGuidePointer**

### **Description**

Data model logical reference to Programmers Guide document.

Content Source: DSS

Constraints:

If Programmers Guide exists then ProgrammersGuidePointer must exist.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ProgrammersGuide

## **ProviderURL**

### **Description**

URL of the Advertisement provider.

Content Source: IOS

### **Reference List**

Name
ProviderAdvertisement

## **QAGranulePointer**

### **Description**

Data model logical reference to QA Granule.

Content Source: DSS

Constraints: If QAGranule exists then QAGranulePointer must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
QAGranule

## **QAPercentCloudCover**

### **Description**

This attribute is used to characterize the cloud cover amount of a granule. This attribute may be repeated for individual parameters within a granule. (Note - there may be more than one way to define a cloud or its effects within a product containing several parameters; i.e. this attribute may be parameter specific)

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
QAStats

## **QAPercentInterpolatedData**

### **Description**

Granule level % interpolated data. This attribute can be repeated for individual parameters within a granule.

Content Source: PGE

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
QAStats

## **QAPercentMissingData**

### **Description**

Granule level % missing data. This attribute can be repeated for individual parameters within a granule.

Content Source: PGE

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
QAStats

## **QAPercentOutofBoundsData**

### **Description**

Granule level % out of bounds data. This attribute can be repeated for individual parameters within a granule.

Content Source: PGE

Constraints: mandatory

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
QAStats

## **QualityTextCommentPointer**

### **Description**

Data model logical reference to collection level pointer to Quality Text Comment document.

Content Source: DSS

Constraints: If QualityText exists then QualityTextCommentPointer exists.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
QualityTextComment

## **RadiusUnits**

### **Description**

The unit of measurement describing the distance from the center of spatial extent or coverage to the furthest point covered by the spatial extent of the locality used to determine a circular region representing general extent or coverage.

Content Source: DP(collection);PGE(granule)

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
Circle

## **RadiusValue**

### **Description**

The distance from the center of spatial extent or coverage to the furthest point covered by the spatial extent of the locality, stated in RadiusUnits, used to determine a circular region representing general extent or coverage.

Content Source: DP(collection);PGE(granule)

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
Circle

## **RangeBeginningDate**

### **Description**

The year (and optionally month, or month and day) when the temporal coverage period being described began.

Content Source: DP(collection);PGE(granule)

Alias: Start Date

Constraints:

RangeBeginningDate is mandatory if RangeDateTime class is used.

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
RangeDateTime

## **RangeBeginningTime**

### **Description**

The first hour (and optionally minute, or minute and second) of the temporal coverage period being described.

Content Source: DP(collection);PGE(granule)

Constraints:

RangeBeginningTime is mandatory if RangeDateTime class is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
RangeDateTime

## **RangeEndingDate**

### **Description**

The last year (and optionally month, or month and day) of the temporal coverage period being described.

GSFC AVHRR This date represents the end date of the latest granule contained in the product.

MM/DD/YY format is product-specific for: sage\_atmos\_dyn, sage\_atmos\_comp, erbe\_erp

MMDDYYYY format is product-specific for: LARC\_FIRE, LARC\_GTE

Content Source: DP(collection);PGE(granule)

Constraints:

RangeEndingDate is mandatory if RangeDateTime class is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
RangeDateTime

## **RangeEndingTime**

### **Description**

The last hour (and optionally minute, or minute and second) of the temporal coverage period being described for granule or collection.

Content Source: DP(collection);PGE(granule)

Constraints:

RangeEndingTime is mandatory if RangeDateTime class is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
RangeDateTime

## **ReferencePaperReference**

### **Description**

Contains the unique ID of the Reference Paper as issued by publisher, such as 'NOS NSG 5', or 'JPL Publication 91- 29'.

Content Source: DP

Constraints: if reference papers utilized, this must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ReferencePaper

## **ReferencePaperType**

### **Description**

Contains the type of reference paper.

Content Source: DP

Constraints: if reference papers utilized, this must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
ReferencePaper

### **Description**

Stand Alone Document

Journal Article

## **RegionalAreaDefinitionGuidePointer**

### **Description**

Logical pointer to the Regional Area Definition Guide.

Content Source: DSS

Constraints: if guide exists, this must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
RegionalAreaDefinitionGuide

## **ReprocessingActual**

### **Description**

Granule level, stating what reprocessing has been performed on this granule.

Content Source: PGE

Constraints:

Constrained to number of times reprocessed.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ECSDataGranule

### **Description**

processed once

reprocessed once

reprocessed twice

## **ReprocessingPlanned**

### **Description**

Granule level, stating what reprocessing may be performed on this granule.

Content Source: PGE

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ECSDataGranule

## **Description**

no further update anticipated  
further update is anticipated  
further update anticipated using enhanced PGE

## **RevisionDate**

### **Description**

Represents the date and possibly the time that this directory entry was created or the latest date and time of its modification or update.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ECSCollection

## **Role**

### **Description**

Classification of individuals who are associated with a given data set.

Content Source: DP

Constraints:

Mandatory if contact is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Contact

## **Description**

Archive  
Funding Source  
Producer  
Distributor  
Data Originator  
Investigator  
Investigator ID  
User Services

## **ScienceQualityFlag**

### **Description**

Granule level flag applying to a granule, and specifically to parameters. When applied to parameter, the flag refers to the quality of that parameter for the granule (as applicable). The parameters determining whether the flag is set are defined by the developers and documented in the Quality Flag Explanation.

Content Source: PGE(granule)

Constraints: One flag from QAFlags must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
QAFlags

### **Description**

Passed - The granule (forparameter) has passed a specified science test.

Failed - The granule (forparameter) has failed a specified science test.

Being Investigated - The granule (forparameter) is being investigated by an expert.

Not Investigated - The granule (forparameter) has not been investigated by an expert.

Inferred Passed

Inferred Failed

Suspect

## **ScienceQualityFlagExplanation**

### **Description**

A text explanation of the criteria used to set science quality flag; including thresholds or other criteria.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
QAFlags

### **Description**

Free Text

## **ScienceReviewDate**

### **Description**

Date of last QA peer review.

Content Source: DP; PGE

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
Review

## **ScienceReviewStatus**

### **Description**

Type of Review which occurred on the 'Science Review Date'

Content Source: DP; PGE

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
Review

### **Description**

QA at DAACs - In general, the DAACs role in the QC process will be to ensure the integrity of the data (non-science quality control) -- i.e. data are not corrupted in the transfer, archival or retrieval process. DAACs may also perform science quality control (though an SCF responsibility) through pre-arranged agreements with their instrument teams.

QA at SCF - The SCFs role in the QC process of collections will be to ensure science quality control of data products over the length of the data gathering process. Techniques such as trend analysis of the data may be applied within this context.

QA by Data Consumers - Data consumers who utilize the datasets will perform an indirect method of quality control, uncovering errors within the datasets as they perfrom their research . Much of this documentation may be found in journal article or conference papers.

None - The status must be set, and cannot default to having been completed. None also applies to those data, which are ingested from external sources and are not known to have been subjected to any form of quality control, or have quality ratings for which the definitions are not available.  
QA within Software

## **SemiMajorAxis**

### **Description**

Radius of the equatorial axis of the ellipsoid.

Content Source: DP

Constraints: SemiMajorAxis > 0.0 Constraints: SemiMajorAxis mandatory if GeodeticModel class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
GeodeticModel

## **SensorCharacteristicDataType**

### **Description**

The datatype of the Instrument Characteristic/attribute defined by InstrumentCharacteristicName.

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
SensorCharacteristic

### **Description**

int  
varchar  
datetime  
date  
time  
float

## **SensorCharacteristicDescription**

### **Description**

A description of the attribute defined by SensorCharacteristicName. (e.g. SensorCharacteristicName=SensorDevice, SensorCharacteristicDescription= Charge coupled device).

Content Source: DP (Collection)

Constraints: Use to define single-valued sensor attributes, not new objects.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
SensorCharacteristic

## **SensorCharacteristicName**

### **Description**

The name of the Sensor Characteristic/attribute. Sensor attributes defined using SensorCharacteristicName must be single-valued attributes of the object 'Sensor' and not attributes of undefined objects.

Content Source: DP (Collection); PGE (Granule)

Constraints: Used to define sensor attributes, not objects associated with sensors.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
SensorCharacteristic

## **SensorCharacteristicUnit**

### **Description**

The unit of the Sensor Characteristic (e.g. nanometers).

Content Source: DP (Collection)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
SensorCharacteristic

## **Description**

Active Cavity Radiometry  
Broadband Microwave Radiometry  
Broadband Thermistor Bolometry  
Cooled Array Grating Spectrometer with photovoltaic HgCdTe detector array  
Cooled Array Grating Spectrometer with photoconductive HgCdTe detector array  
Doubly Split Bandpass Microwave Radiometry  
HSB Chan 1 NOT IMPLEMENTED AND CONTAINS NO VALID DATA  
Silicon Diode Detector behind sharp cut-on and cut-off interference filter  
Silicon Diode Detector behind short-wave side sharp cut-on interference filter  
Spectrometry  
Whiskbroom Scanning Radiometry  
Spectroscopy  
Imaging Radiometry  
Laser Ranging  
Radiometry  
Split Banpass Microwave Radiometry  
Imaging Spectroradiometry  
Microwave Limb Sounding  
Passive Microwave  
Imaging Spectroradiometry  
Infrared Sounding  
Laser Altimetry  
Photon Counting  
Pseudorange and carrier phase  
Ranging between the tops and bottoms of clouds

## **SensorCharacteristicValue**

### **Description**

The value of the attribute defined in the class SensorCharacteristicDescription. Attributes must have single values.

Content Source: DP (Collection); PGE (Granule)

Constraints: Domain defined by SensorCharacteristicDataType

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
SensorCharacteristicValueClass

## **SensorGuidePointer**

### **Description**

Logical pointer to the Sensor Guide.

Content Source: DAAC Alias:

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
SensorGuide

## **SensorLongName**

### **Description**

The generic or long name description of a sensor. (e.g. Visible-Near Infrared, Human Visual, Human Auditory)

Content Source: DP (Collection)

Alias: Detector Long Name

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
Sensor

### **Description**

Active Cavity Radiometer

Enhanced Thematic Mapper Plus

Shortwave Scanning Thermistor Bolometer Detector

Total Scanning Thermistor Bolometer Detector  
Window Scanning Thermistor Bolometer Detector  
Charge Coupled Device  
PIN Diode Spectrometer  
Shortwave Infrared  
Thermal Infrared  
Visible Near Infrared  
Charge Coupled Devicebased Pushbroom Nadir Viewing Camera A  
Charge Coupled Devicebased Pushbroom Fore Viewing Camera A  
Charge Coupled Devicebased Pushbroom Aft Viewing Camera A  
Charge Coupled Devicebased Pushbroom Fore Viewing Camera B  
Charge Coupled Devicebased Pushbroom Aft Viewing Camera B  
Charge Coupled Devicebased Pushbroom Fore Viewing Camera C  
Charge Coupled Devicebased Pushbroom Aft Viewing Camera C  
Charge Coupled Devicebased Pushbroom Fore Viewing Camera D  
Charge Coupled Devicebased Pushbroom Aft Viewing Camera D  
Correlation Spectrometer at 2.3 um  
Correlation Spectrometer at 2.4 um  
Correlation Spectrometer at 4.7 um  
Global Positioning System  
Special Sensor Microwave/Imager  
Cross-track Scanning Radiometer  
Visible and Infrared Spin Scan Radiometer  
Light Amplification by Stimulated Emission of Radiation  
Light Detection and Ranging  
Microwave Limb Sounder  
Multispectral Imaging Radiometer  
M1a Detector IR span wavenumber range 2552.53 cm<sup>-1</sup> through 2676.93 cm<sup>-1</sup>  
M1b Detector IR span wavenumber range 2309.49 cm<sup>-1</sup> through 2433.60 cm<sup>-1</sup>  
M2a Detector IR span wavenumber range 2434.58 cm<sup>-1</sup> through 2554.90 cm<sup>-1</sup>  
M2b Detector IR span wavenumber range 2169.46 cm<sup>-1</sup> through 2311.52 cm<sup>-1</sup>  
M3 Detector IR span wavenumber range 1337.20 cm<sup>-1</sup> through 1442.13 cm<sup>-1</sup>  
M4a Detector IR span wavenumber range 1540.36 cm<sup>-1</sup> through 1613.20 cm<sup>-1</sup>  
M4b Detector IR span wavenumber range 1459.55 cm<sup>-1</sup> through 1526.69 cm<sup>-1</sup>  
M4c Detector IR span wavenumber range 1283.63 cm<sup>-1</sup> through 1338.19 cm<sup>-1</sup>  
M4d Detector IR span wavenumber range 1216.29 cm<sup>-1</sup> through 1271.91 cm<sup>-1</sup>  
M5 Detector IR span wavenumber range 1055.13 cm<sup>-1</sup> through 1135.70 cm<sup>-1</sup>  
M6 Detector IR span wavenumber range 973.03 cm<sup>-1</sup> through 1045.24 cm<sup>-1</sup>  
M7 Detector IR span wavenumber range 910.51 cm<sup>-1</sup> through 973.44 cm<sup>-1</sup>  
M8 Detector IR span wavenumber range 910.51 cm<sup>-1</sup> through 973.44 cm<sup>-1</sup>  
M9 Detector IR span wavenumber range 788.51 cm<sup>-1</sup> through 851.77 cm<sup>-1</sup>  
M10 Detector IR span wavenumber range 727.20 cm<sup>-1</sup> through 780.97 cm<sup>-1</sup>  
M11 Dectector IR span wavenumber range 687.26 cm<sup>-1</sup> through 728.08 cm<sup>-1</sup>

M12 Detector IR span wavenumber range 649.23 cm-1 through 681.66 cm-1  
VNIR Channel 1 spans wavelength range 0.40 micrometer through 0.44 micrometer  
VNIR Channel 2 spans wavelength range 0.58 micrometer through 0.68 micrometer  
VNIR Channel 3 spans wavelength range 0.71 micrometer through 0.93 micrometer  
VNIR Channel 4 spans wavelength range 0.48 micrometer through 0.95 micrometer  
AMSU-A Chan 1 center freq 23.800 GHz bandpass 0.270 GHz  
AMSU-A Chan 2 center freq 31.400 GHz bandpass 0.180 GHz  
AMSU-A Chan 3 center freq 50.300 GHz bandpass 0.180 GHz  
AMSU-A Chan 4 center freq 52.800 GHz bandpass 0.400 GHz  
AMSU-A Chan 5 center freq 53.596+-0.115 GHz bandpass 2x0.170 GHz  
AMSU-A Chan 6 center freq 54.400 GHz bandpass 0.400 GHz  
AMSU-A Chan 7 center freq 54.940 GHz bandpass 0.400 GHz  
AMSU-A Chan 8 center freq 55.500 GHz bandpass 0.330 GHz  
AMSU-A Chan 9 center freq 57.290344 GHz bandpass 0.330 GHz  
AMSU-A Chan 10 center freq 57.290344+-0.217 GHz bandpass 2x0.0.78 GHz  
AMSU-A Chan 11 center freq 57.290344+-0.3222+-0.048 bandpass 4x0.036 GHz  
AMSU-A Chan 12 center freq 57.290344+-0.3222+-0.022 bandpass 4x0.016 GHz  
AMSU-A Chan 13 center freq 57.290344+-0.3222+-0.010 bandpass 4x0.008 GHz  
AMSU-A Chan 14 center freq 57.290344+-0.3222+-0.0045 bandpass 4x0.003 GHz  
AMSU-A Chan 15 center freq 89.000 GHz bandpass 6.000 GHz  
HSB Chan 1 NOT IMPLEMENTED AND CONTAINS NO VALID DATA  
HSB Chan 2 center freq 150.00 GHz bandpass 4.0 GHz  
HSB Chan 3 center freq 183.31+-1.0 GHz bandpass 2x0.5 GHz  
HSB Chan 4 center freq 183.31+-3.0 GHz bandpass 2x1.0 GHz  
HSB Chan 5 center freq 183.31+-7.0 GHz bandpass 2x2.0 GHz  
Infrared Sounder  
Laser Altimeter  
Photon Counter for the 532 nm Aerosol Returns  
Cloud LIDAR  
Dual Frequency GPS receiver  
Geostationary Operational Environmental Satellite Imager  
Lighting Imaging Sensor

## **SensorShortName**

### **Description**

A sensor is a defined sensory sub-component of an instrument. (e.g. InstrumentShortName=ASTER, NumberofSensors= 3, SensorShortName= SWIR, SensorShortName= TIR, SensorShortName= VNIR) In cases where the Instrument has a single Sensor or the Instrument and Sensor are synonymous then both attributes should be populated. (e.g. AVHRR). Sensors cannot exist without Instruments.

Content Source: DP (Collection); PGE (Granule)

Alias: Detector Short Name

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Sensor

### **Description**

ACR  
ETM+  
Shortwave Detector  
Total Detector  
Window Detector  
CCD  
GPS  
Laser  
LIDAR  
PIN Diode  
SWIR  
TIR  
VNIR  
VNIR Channel 1  
VNIR Channel 2  
VNIR Channel 3  
VNIR Channel 4  
AMSU-A Channel 1  
AMSU-A Channel 2  
AMSU-A Channel 2  
AMSU-A Channel 4  
AMSU-A Channel 5  
AMSU-A Channel 6  
AMSU-A Channel 7  
AMSU-A Channel 8  
AMSU-A Channel 9  
AMSU-A Channel 10  
AMSU-A Channel 11  
AMSU-A Channel 12  
AMSU-A Channel 13

AMSU-A Channel 14  
AMSU-A Channel 15  
CCD Camera AN  
CCD Camera AF  
CCD Camera AA  
CCD Camera BF  
CCD Camera BA  
CCD Camera CF  
CCD Camera CA  
CCD Camera DF  
CCD Camera DA  
HSB Channel 1  
HSB Channel 2  
HSB Channel 2  
HSB Channel 4  
HSB Channel 5  
LA  
PC  
M1a Detector Array  
M1b Detector Array  
M2a Detector Array  
M2b Detector Array  
M3 Detector Array  
M4a Detector Array  
M4b Detector Array  
M4c Detector Array  
M4d Detector Array  
M5 Detector Array  
M6 Detector Array  
M6 Detector Array  
M8 Detector Array  
M9 Detector Array  
M10 Detector Array  
M11 Detector Array  
M12 Detector Array  
2.3um Radiometer  
2.4um Radiometer  
4.7um Radiometer  
AN  
AF  
AA  
BF  
BA

CF  
CA  
DF  
DA  
VISSR  
MIR  
SSM/I  
ShortWave Detector  
1064 nm Detector  
GPS Receiver  
GOES Imager  
LIS  
MLS  
IRS

## SensorTechnique

### Description

The sensor technique. (e.g. laser altimetry)

Content Source: DP (Collection)

### Annotation

Reference Document: 420-TP-015-001, February 1997.

### Reference List

Name
Sensor

### Description

Active Cavity Radiometry

Broadband Microwave Radiometry

Broadband Thermistor Bolometry

Cooled Array Grating Spectrometer with photovoltaic HgCdTe detector array

Cooled Array Grating Spectrometer with photoconductive HgCdTe detector array

Doubly Split Bandpass Microwave Radiometry

HSB Chan 1 NOT IMPLEMENTED AND CONTAINS NO VALID DATA

Silicon Diode Detector behind sharp cut-on and cut-off interference filter

Silicon Diode Detector behind short-wave side sharp cut-on interference filter

Spectrometry

Whiskbroom Scanning Radiometry

Spectroscopy  
Imaging Radiometry  
Laser Ranging  
Radiometry  
Split Bandpass Microwave Radiometry  
Imaging Spectroradiometry  
Microwave Limb Sounding  
Passive Microwave  
Imaging Spectroradiometry  
Infrared Sounding  
Laser Altimetry  
Photon Counting  
Pseudorange and carrier phase  
Ranging between the tops and bottoms of clouds

## **SequenceNumber**

### **Description**

Line number for description over 255 positions.

### **Reference List**

Name
AdvertisementDescription

## **ServiceClass**

### **Description**

This attribute describes the class of service. (e.g. subset)

Content Source: IOS, DSS

### **Reference List**

Name
SignatureServiceAdvertisement

## **ServiceName**

### **Description**

The name of the service, such as SubsetByParameter which belongs to the ServiceClass Subset.

Content Source: IOS, DSS

### **Reference List**

Name
SignatureServiceAdvertisement

## **ServiceURL**

### **Description**

URL that references the service for a MIME type service advertisement. This URL is what would be invoked to access the service.

Content Source: IOS

### **Reference List**

Name
MimeServiceAdvertisement

## **ShortName**

### **Description**

This name will identify the short name associated with the collection or granule. This includes the ECS Technical Baseline product names, i.e. CER02, MOD12, etc. This is the official reference name used in identifying the contents of the data collection.

Content Source: DP

Constraints: must be unique

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
CollectionDescriptionClass

## **Description**

reference RTM ECS ESDT ShortName Baseline and proposed ESDT ShortName Baseline on EDHS

## **SizeMBECSDataGranule**

### **Description**

The size attribute will indicate the volume of data contained in the granule.

Content Source: PGE

Constraints:

mandatory for granule

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
ECSDataGranule

## **SouthBoundingCoordinate**

### **Description**

Southern-most limit of coverage expressed in geodetic latitude.

Content Source: DP(collection);PGE(granule)

Constraints: SouthBoundingCoordinate not null for collection only.

Constraints: SouthBoundingCoordinate => -90.0

Constraints: SouthBoundingCoordinate <= +90.0

Constraints: SouthBoundingCoordinate <= NorthBoundingCoordinate

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
BoundingRectangle

## **SpatialCoverageType**

### **Description**

This attribute denotes whether the locality/coverage requires horizontal, vertical, or both in the spatial domain and coordinate system definitions.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
Spatial

### **Description**

HORIZ&VERT - Horizontal & Vertical

Horizontal

Vertical

## **SpatialKeyword**

### **Description**

This attribute specifies a word or phrase which serves to summarize the spatial regions covered by the collection. It may be repeated if several regions are covered. This often occurs when a collection is described as covering some large region, and several smaller subregions within that region.

Content Source: DP

Alias: Location

Location Keyword

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## Reference List

Name
SpatialKeywordClass

## Description

Africa  
Antarctica  
Arctic Ocean  
Asia  
Atlantic Ocean  
Equatorial  
Europe  
Global  
Indian Ocean  
Mid-Latitude  
North America  
Pacific Ocean  
South America  
Southern Ocean  
Central America  
Oceania  
North Africa  
Central Africa  
West Africa  
Southern Africa  
East Africa  
Western Asia  
Central Asia  
Southern Asia  
Southeast Asia  
Eastern Asia  
Western Europe  
Eastern Europe  
Middle East  
Northern Hemisphere  
Southern Hemisphere  
Eastern Hemisphere  
Western Hemisphere  
North Atlantic Ocean  
North Pacific Ocean  
South Atlantic Ocean  
South Pacific Ocean

Baltic Sea  
Bering Sea  
Black Sea  
Caribbean Sea  
Caspian Sea  
East China Sea  
Great Lakes  
Gulf of Mexico  
Hudson Bay  
Mediterranean Sea  
North Sea  
Red Sea  
Sea of Japan  
Sea of Okhotsk  
South China Sea  
Yellow Sea  
Afghanistan  
Albania  
Algeria  
American Samoa  
Andorra  
Angola  
Anguilla  
Antigua and Barbuda  
Argentina  
Armenia  
Australia  
Austria  
Azerbaijan  
Bahamas  
Bahrain  
Bangladesh  
Barbados  
Belarus  
Belgium  
Belize  
Benin  
Bermuda  
Bhutan  
Bolivia  
Bosnia and Herzegovina  
Botswana  
Brazil

Brunei Darussalam  
Bulgaria  
Burkina Faso  
Burma  
Burundi  
Cambodia  
Cameroon  
Canada  
Cape Verde  
Central African Republic  
Chad  
Chile  
China  
Colombia  
Comoros  
Congo  
Cook Islands  
Costa Rica  
Cote d'Ivoire  
Croatia  
Cuba  
Cyprus  
Czech Republic  
Denmark  
Djibouti  
Dominica  
Dominican Republic  
Ecuador  
Egypt  
El Salvador  
Equatorial Guinea  
Eritrea  
Estonia  
Ethiopia  
Fiji  
Finland  
France  
Gabon  
Gambia  
Georgia  
Germany  
Ghana  
Greece

Grenada  
Guam  
Guatemala  
Guinea  
Guinea-Bissau  
Guyana  
Haiti  
Holy See  
Honduras  
Hungary  
Iceland  
India  
Indonesia  
Iran  
Iraq  
Ireland  
Israel  
Italy  
Jamaica  
Japan  
Jordan  
Kazakhstan  
Kenya  
Kiribati  
Korea, DPR  
Korea, Republic  
Kuwait  
Kyrgyzstan  
Laos  
Latvia  
Lebanon  
Lesotho  
Liberia  
Libya  
Liechtenstein  
Lithuania  
Luxembourg  
Macedonia, FYR  
Madagascar  
Malawi  
Malaysia  
Maldives  
Mali

Malta  
Marshall Islands  
Mauritania  
Mauritius  
Mexico  
Micronesia  
Moldova  
Monaco  
Mongolia  
Montserrat  
Morocco  
Mozambique  
Namibia  
Nauru  
Nepal  
Netherlands  
New Zealand  
Nicaragua  
Niger  
Nigeria  
Niue  
Norway  
Oman  
Pakistan  
Palau  
Panama  
Papua New Guinea  
Paraguay  
Peru  
Philippines  
Poland  
Portugal  
Qatar  
Romania  
Russian Federation  
Rwanda  
San Marino  
Sao Tome and Principe  
Saudi Arabia  
Senegal  
Seychelles  
Sierra Leone  
Singapore

Slovakia  
Slovenia  
Solomon Islands  
Somalia  
South Africa  
Spain  
Sri Lanka  
St Kitts and Nevis  
St Lucia  
St Vincent and the Grenadines  
Sudan  
Suriname  
Swaziland  
Sweden  
Switzerland  
Syria  
Tajikistan  
Tanzania  
Thailand  
Togo  
Tokelau  
Tonga  
Trinidad and Tobago  
Tunisia  
Turkey  
Turkmenistan  
Tuvalu  
Uganda  
Ukraine  
United Arab Emirates  
United Kingdom  
United States of America  
Uruguay  
Uzbekistan  
Vanuatu  
Venezuela  
Viet Nam  
Wallis and Futuna Islands  
Yemen  
Yugoslavia  
Zaire  
Zambia  
Zimbabwe

## **SSAPAlgorithmPackageName**

### **Description**

Name of the Algorithm Package (from AP) that this component is associated with. An SSAPComponent may only be associated with ONE AP.

### **Reference List**

Name
SSAPComponent

## **SSAPAlgPackageVersion**

### **Description**

Versions of the Algorithm Package (from AP) that this SSAP Component is associated with. An SSAPComponent can be associated with multiple AP versions.

### **Reference List**

Name
SSAPComponentAPVersion

## **SSAPInsertDate**

### **Description**

Data of insertion to the Data Server.

### **Reference List**

Name
SSAPComponent

## **StandAloneDocumentPointer**

### **Description**

Data model logical reference to a Stand-Alone Document.

Content Source: DSS

Constraints: if guide exists, this must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
StandAloneDocument

## **StartDate**

### **Description**

Date of Advertisement creation.

### **Reference List**

Name
AdvertisementMaster

## **StartOrbitNumber**

### **Description**

Orbit number at start of data granule.

Content Source: PGE

Constraints: StartOrbitNumber is mandatory if OrbitCalculatedSpatialDomain class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
OrbitCalculatedSpatialDomain

## **StateProvince**

### **Description**

The state or province of the address.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
ContactAddress

### **Description**

Free Text

## **StopOrbitNumber**

### **Description**

Orbit number at end of data granule.

Content Source: PGE

Constraints: StopOrbitNumber is mandatory if OrbitCalculatedSpatialDomain class is applicable.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
OrbitCalculatedSpatialDomain

## **StorageMedium**

### **Description**

The quantity and type of medium on which the distributed data are stored.

Content Source: DAAC

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
StorageMediumClass

### **Description**

35 mm Slides  
Hardcopy Plots  
Magnetic Disks  
Magnetic Tapes  
Microfiche Slides  
Microfilm Reels  
Optical Disks

Online - Information required to directly obtain the collection electronically.

## **StreetAddress**

### **Description**

An address line for the address, used for mailing or physical addresses of organizations or individuals who serve as points of contact.

Content Source: DP; DAAC

Alias: Address

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
ContactAddress

**Description**

Free Text

**SuggestedUsage****Description**

This attribute describes how this collection or granule may be best used to support earth science/global change research.

Content Source: DP

**Annotation**

Reference Document: 420-TP-015-001, February 1997

**Reference List**

Name
ECSCollection

**Description**

Free Text

**SWDateLastModified****Description**

Date and time when the software was last modified.

Content Source: DP

Constraints:

Mandatory if any modification made.

**Annotation**

Reference Document: 420-TP-015-001, February 1997.

**Reference List**

Name
AlgorithmPackage

## **SWDevelopmentStandardPointer**

### **Description**

Data model logical reference to Software Development Standard document.

Content Source: DSS

Constraints:

If SW Development Standard exists then SWDevelopmentStandardPointer must exists.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
SWDevelopmentStandard

## **SWVersion**

### **Description**

The actual version of the source code in the SSAP.

### **Reference List**

Name
AlgorithmPackage

## **SystemDescriptionPointer**

### **Description**

Logical reference to the System Description document.

Content Source: DSS

Constraints:

If System Description exists then SystemDescriptionPointer exists.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
SystemDescription

## **TelephoneNumber**

### **Description**

Number of org or indiv who is point of contact. The general format of the number includes country, area, and STD codes, as required for the full telephone number. Multi-extensions should be single entries rather than part of a single entry text.

Content Source: DAAC; DP

Constraints:

Phone is dependent upon TelephoneNumberType='Facsimile', 'TDD/TTY', 'Voice'

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
Telephone

## **TelephoneNumberType**

### **Description**

The type of telephone number being provided in this instance of the phone number, in order to reach the organization or individual who serves as a point of contact. Voice number is used to speak to the org or individual, the TDD/TTY number which hearing-impaired can converse with org or indiv., or the fa(x)csimile number of the org's or indiv.

Content Source: DAAC; DP

Alias: Contact Voice Telephone

Contact TDD/TTY Telephone

Contact Facsimile Telephone

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

## **Reference List**

Name
Telephone

## **Description**

Voice  
TDD/TYY  
Facsimile

## **TemporalKeyword**

### **Description**

This attribute specifies a word or phrase which serves to summarize the temporal characteristics referenced in the collection.

i.e. Monthly Composite, Annual Mean.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
TemporalKeywordClass

## **Description**

Free Text

## **TemporalRangeType**

### **Description**

This attribute tells the system and ultimately the end user how temporal coverage is specified for the collection, granule, or event.

Content Source:      DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
Temporal

### **Description**

Periodic - Regularly occurring periods of equal time.

Point In Time - A single date and time, usually used for in-situ measurements.

Continuous Range - A single continuous range of time with a discrete start date time and stop date time.

Discontinuous Multiple Range - A span of time with irregular temporal coverage gaps, requiring the use of multiple start/stop datetime pairs to denote the complete coverage.

Multiple Point In Time - Multiple occurrences of single date and time points.

## **TemporalType**

### **Description**

The type of temporal characterization.

### **Description**

Range

Single

## **TestPlanPointer**

### **Description**

Data model reference to document specification.

### **Annotation**

Content Source: DSS

Alias:

Constraints:

If Test Plan exists then TestPlanPointer exists.

Described, in DID 311, as an attribute of class TestPlan.

## **Reference List**

Name
TestPlan

## **TimeOfDay**

### **Description**

The hour (and optionally minute, or minute and second) of the day. This attribute is used to specify a single point in time covered by a data collection, granule, or event. In the GSFC\_CZCS collection this would reflect the Pass\_time which is the time of the first scan of the scene.

Content Source: DP(collection);PGE(granule)

Constraints:

TimeOfDay is mandatory if SingleDateTime class is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
SingleDateTime

## **TimeType**

### **Description**

This attribute provides the time system which the values found in temporal subclasses represent.

Content Source: DP

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
Temporal

### **Description**

UTC - Coordinated Universal Time

UT - Universal Time

## **Title**

### **Description**

The full title of the document.

Content Source: DP

Constraints: mandatory for all documents

### **Annotation**

Reference Document: 420-TP-015-001, February 1997.

### **Reference List**

Name
Document
AdvertisementMaster

### **Description**

Free Text

## **UniqueId**

### **Description**

Attribute for internal use only.

Content Source: IOS

### **Reference List**

Name
AdvertisementMaster

## **UpperTitle**

### **Description**

Upper case of Title.

Content Source: IOS

## **Reference List**

Name
AdvertisementMaster

## **UserCommentDocumentPointer**

### **Description**

Data model logical reference to User Comment Document.

Content Source: DSS

Constraints: User comment document must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
UserCommentDocument

## **ValidationDocumentPointer**

### **Description**

Data model logical reference to Validation Document.

Content Source: DSS

Constraints: Validation document must exist.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ValidationDocument

## **VersionDescription**

### **Description**

A brief description of the differences between this collection version and another collection version.

Source: DP

### **Reference List**

Name
ECSCollection

## **VersionID**

### **Description**

Version identifier of the data collection.

Content Source: DP

Constraints:

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

### **Reference List**

Name
CollectionDescriptionClass

## **VerticalSpatialDomainType**

### **Description**

This attribute describes the type of the area of vertical space covered by the locality.

Content Source: DP(collection);PGE(granule)

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
VerticalSpatialDomain

## **Description**

Atmosphere Layer

Cloud Layer

Maximum Altitude

Maximum Depth

Minimum Altitude

Minimum Depth

## **VerticalSpatialDomainValue**

## **Description**

This attribute describes the extent of the area of vertical space covered by the granule. Must be accompanied by an Altitude Encoding Method description. The datatype for this attribute is the value of the attribute VerticalSpatialDomainType. The unit for this attribute is the value of either DepthDistanceUnits or AltitudeDistanceUnits.

Content Source: DP(collection);PGE(granule)

## **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
VerticalSpatialDomain

## **Description**

Free Text

TOA - Top of Atmosphere

SFC - Surface of ocean or land, regardless to topography.

Cloud - Any cloud layers found.

Tropos - Troposphere. Must be accompanied by Altitude Encoding Method description.  
(default: 0 to 10 km)

Atmos - Troposphere + Stratosphere. Must be accompanied by Altitude Encoding Method description. (default: SFC to 30km)

Stratos - Stratosphere. Must be accompanied by Altitude Encoding Method description. (default: 10 to 30km)

Ex - Exosphere. Must be accompanied by Altitude Encoding Method description. (default: 700km)

Mid-Atmos - Upper troposphere to mesopause. Must be accompanied by Altitude Encoding Method description. (default: 10-120km)

Near\_SFC - Near surface layer (within boundary layer). Must be accompanied by Altitude or Depth Encoding Method description. (default: SFC to +- 1km)

Plume\_col - Vertical extent of volcanic eruption plume. Must be accompanied by Altitude Encoding Method description for this volcanic eruption.

Plume\_top - Top of volcanic eruption plume. Must be accompanied by Altitude Encoding Method Description for this volcanic eruption.

Sub\_SFC - Layers immediately beneath land surface.

TOO - Top of Ocean (oceanic mixed layer)

Atmosphere Profile - Data extends vertically through atmosphere.

## **WestBoundingCoordinate**

### **Description**

Western-most coordinate of the limit of coverage expressed in longitude.

Content Source: DP(collection);PGE(granule)

Constraints: WestBoundingCoordinate not null for collection only.

Constraints: WestBoundingCoordinate => -180.0

Constraints: WestBoundingCoordinate <= +180.0

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
BoundingRectangle

## **ZonelIdentifier**

### **Description**

The appropriate numeric or alpha code used to identify the various zones in this grid coordinate system. See domain values of coordinate system for constraints on the zone numbers.

Content Source: DP(collection);PGE(granule)

Constraints: mandatory if grid coordinate system is used.

### **Annotation**

Reference Document: 420-TP-015-001, February 1997

## **Reference List**

Name
ZoneIdentifierClass

### **Description**

Universal Transverse Mercator (UTM) - 1<= UTM Zone Number <=60 for the Northern Hemisphere; -60 <= UTM Zone Number <= -1 for the Southern Hemisphere.

State Plane Coordinate System of 1927 - Domain values for identifier of the SPCS zone are four digit numeric codes and codes for State Plane Coordinate Systems.

State Plane Coordinate System of 1983

ARC Coordinate System - 1<= ARC System Zone Identifier <= 18

Other Grid System

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